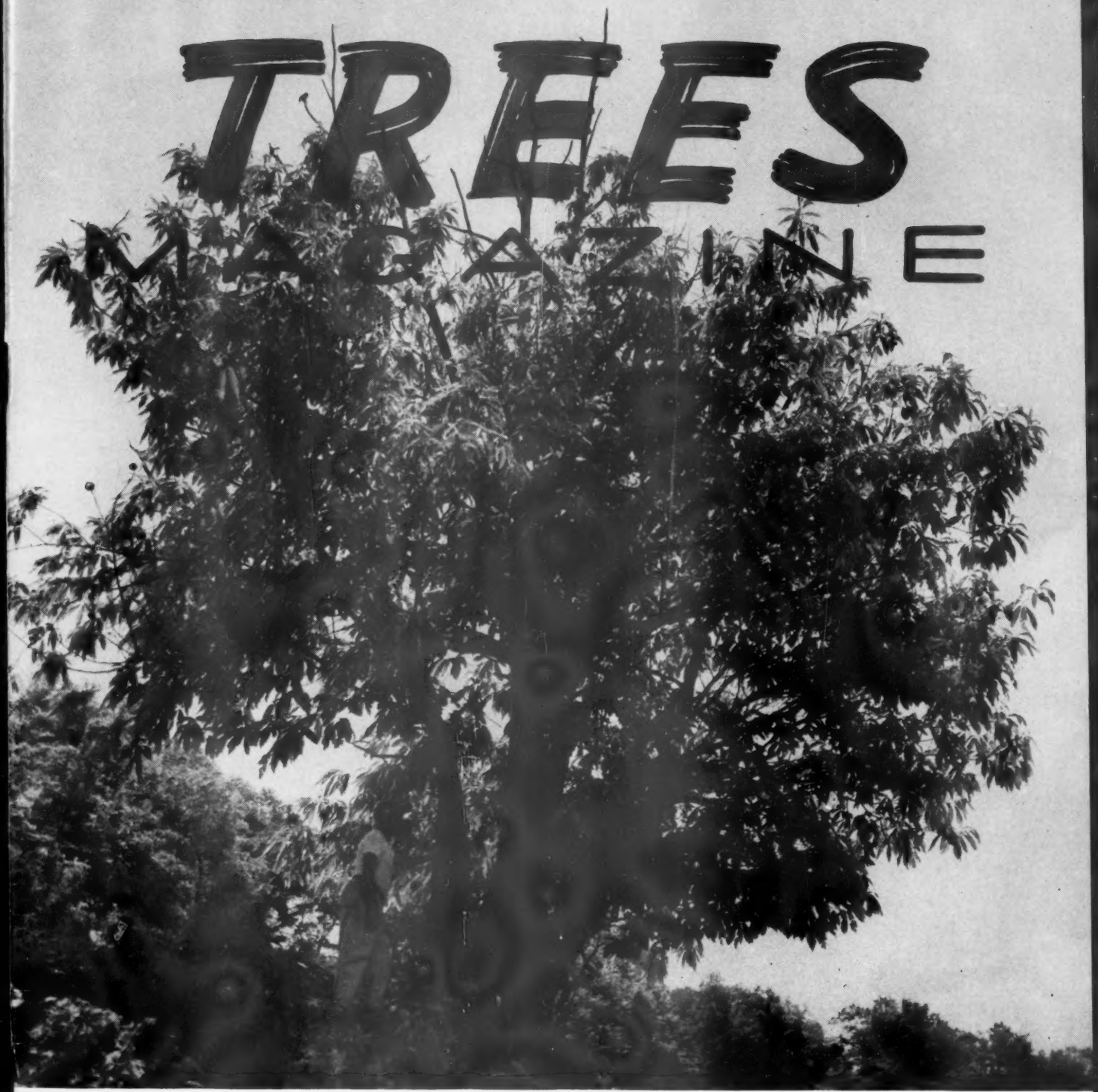
# TREES MAGAZINE



*An Old American Chestnut Still Fighting The Blight*

**Be There — Santa Barbara — National Shade Tree Conference — August 1 – 5**

***Will The Chestnut Return?*** **Roger W. Pease**

***Sydney Museum Cultivates Eucalyptus Plantations*** **Peter Davison**

May-June 1955 *The Journal of American Arboriculture* Vol. 15. No. 4

**McCULLOCH** *the talk of the woods*

Where woodsmen gather, talk turns to the light, fast Model 47 chain saw. Weight 30 lb, price $279.50, f.o.b. McCulloch Motors Corp., Los Angeles 45, Calif.

McCULLOCH

WORLD'S LARGEST CHAIN SAW BUILDERS

-4084

# ALONG THE WAY With .... EDW. SCANLON

■ So a LOT OF YOU SKINNERS go for uniforms for YOUR MEN—well, you should HAVE RED FACES—Take a look at TIME MAGAZINE, page 13, April 25 issue—in an ad for "LEISUREWEAR" two NATTY LADS with a BOOK ON "TREE SURGERY" are working on a "spruce"—"SPRUCE UP," GET IT—TWO DOLLS in the picture also, ONE IS HOLDING THE HAND of the fashion plate on the ladder. The BOY WHO DREAMED up that ad must have BROKEN OFF THE NEEDLE in his arm.

■ **There's a BIRD THAT INHABITS the ARROYO alongside of the RANCHO that has the FUNNIEST CALL I've ever heard—it sounds like "POOP POOP ADOOP," and he goes ON AND ON far into the night—CAN'T IDENTIFY HIM; anybody KNOW HIS NAME?**

■ Here's ONE FOR THE BOOK: A Cleveland tree concern has listed as an affiliation the following: "THE TREE SURGEONS SOCIETY FOR THE PRESERVATION OF SHADE AND ORNAMENTAL TREES OF AMERICA"—Do any of you lads belong to this "Society," the EXISTENCE OF WHICH has not been brought TO OUR ATTENTION to date.

■ **GORDON KNOWLES' HELLER-GRO fertilizer organization is SETTING UP AN EASTERN WAREHOUSE. It will be located at 5 ELM ST., MANCHESTER, MASS. If you can CONTACT GORDON at that address—and TRY HIS PRODUCT, a long list of users ATTEST TO ITS VALUE.**

■ The SECOND STREET TREE AND UTILITY CONFERENCE will be held in Cleveland on MARCH 7-8, 1957. Because of the CAPACITY CROWD that taxed the facilities of the BEAUTIFUL WADE PARK MANOR where the FIRST CONFERENCE was held LAST MARCH, it was deemed advisable to provide for the CONSIDERABLE INCREASE IN ATTENDANCE (to about 600) that is indicated for the SECOND CONFERENCE. Arrangements have been completed with MR. ELMORE BACON of the HOTEL CLEVELAND to use the facilities of that FINE ESTABLISHMENT. So, MARK THIS DATE—MARCH, 7-8, 1957 (not 1956) SECOND STREET TREE AND UTILITY CONFERENCE, HOTEL CLEVELAND, Cleveland, Ohio.

■ **I'd STILL LIKE TO HAVE some one come up with EVEN ONE GOOD REASON why the SYCAMORE MAPLE (ACER PSEUDOPLATANUS) and its several outstandingly beautiful variations ARE NOT TO BE CONSIDERED AS EXCELLENT STREET AND HOME TREES. So far NO SOUND REASONS HAVE BEEN ADVANCED. Saw a number of 20 footers on a Cleveland street the other day with the PICTURESQUE PENDULOUS PANICLES of fruit that give the tree such AN EXOTIC APPEARANCE. Also a street WE PLANTED SEVERAL years ago WAS BEAUTIFUL AND GROWING VIGOROUSLY.**

■ The block of FRAXINUS ORNUS (FLOWERING ASH) blossomed for the FIRST TIME at THE RANCHO this spring—WHAT A DELICATE FRAGRANCE. This tree you SHOULD USE ON STREETS. Its fragrance would MAKE IT A SENSATION—and its bright shiny green foliage and 25 foot size would give you a tree that would FIT A GREAT MANY STREET SITES without conflict.

■ **The OLIVER CORP., 400 West Madison St., Chicago, have issued a manual on the "CONTROL OF DUTCH ELM DISEASE." Anyone WISHING A COPY need only ASK and they shall RECEIVE.**

■ This is BEING WRIT on May 22 and WE HAVEN'T HAD A TRACE OF RAIN SINCE APRIL 23. Talk about California and Arizona—yipe—and the WORST OF IT IS we have LAKE ERIE SITTING HERE DOING NOTHING while tinhorn politicians QUIBBLE ABOUT TELEVISING MORE BASEBALL GAMES—who wants to see the third place also rans anyway—lets get a COUPLE MORE PIPES into that lake.

■ **AL DeSHANO stopped by the RANCHO last week with a NEW GIZMO he has—and ITS A GOOD ONE—for LIFTING STUMPS AND LOGS—a hydro crane with 2 TON CAPACITY—it's a neat package—AL'S COMPANY is the JEFFREY MFG. CO., FALMOUTH, KY.**

■ BERT FLEMER of the F AND F NURSERIES AT SPRINGFIELD, N. J., is a NEW MEMBER on the VERY ACTIVE New Jersey NATIONAL ARBOR DAY COMMITTEE. HARRY J. BANKER is State Chairman.

■ **The MEMORY OF THE LATE RAY KOON will be revered in a RECENT DECISION by the MASS. TREE WARDEN AND FORESTERS ASS'N—their annual scholarship in ARBORICULTURE AT THE UNIV. OF MASS. will henceforth BE KNOWN as the RAY M. KOON SCHOLARSHIP.**

■ We WERE GRIEVED recently to learn of the passing on Feb. 1st of MRS. SELMA LOUDON, WIFE OF DICK. The SINCEREST SYMPATHY of the MANY MEMBERS of the SHADE TREE CONFERENCE who knew THIS CHARMING LADY go out TO DICK.

■ **DR. JOHN R. HAVIN has been appointed Head of the WALTHAM FIELD STATION of the Univ. of Massachusetts.**

■ I am sure EVERYONE WILL BE SHOCKED to learn of the death of JOE FENNELL ON MARCH 12TH at St. Vincents Hospital, Bridgeport, Conn. JOE was one of the OLD STANDBYS in the tree game and HIS FRIENDLY MANNER had made him MANY FRIENDS thruout the country. I received a letter from JOE'S SISTER who is a SISTER OF MERCY, SISTER MARY CELESTE, at New Haven, Conn. She enclosed a poem written in MEMORY OF JOE by SISTER MARY ANTONIUS. It is reproduced on page 5.

■ **SIDEWALKS DAMAGED by TREE ROOTS AND TRUNKS, those SENTIMENTAL FOREST GIANTS planted in "flower pots," are causing SERIOUS FINANCIAL problems (and probably political) in CLEVELAND and TOLEDO to name ONLY a FEW CITIES.**

■ The new SUPERINTENDANT OF TREES at LONG BEACH, CALIF., is KAYE I. HALL formerly tree foreman at PALO ALTO. Congrats Kaye and LOTS OF LUCK—also to YOUR SUCCESSOR IN P. A., ROBERT LAHN.

## CONTENTS

Vol. 15 Bi-Monthly No. 4

**Subscription Price $2.00 Per Year**
**(Foreign $2.50) 35 Cents Per Copy**
**TREES MAGAZINE**
**7621 Lewis Rd., Olmsted Falls, Ohio**

***The Editors of TREES invite discussions, comments and all types of literary materials pertaining to trees and tree preservation from any person engaged either in the scientific advancement or commercial development of the field.***

CONTENTS

Editorial . . . . . 4
Street Trees Need Sense — Not Sentiment
Tribute To Joe Fennell . . . . . 5
Harry Banker Heads Rutgers Fellowship . . . . . 5
Letter — Jos. A. Sweeney . . . . 5
Will the Chestnut Return? . . . . 6
*by Roger W. Pease*
Sydney Museum Cultivates Eucalyptus Plantations . . . 7
*by Peter Davison*
Big Trees and Arbor Day . . . . 9
Determining the Value of Shade Trees . . . . . 10
NAA News . . . . . 20
*by Paul E. Tilford*
Authors and Books . . . . . 22

## FLASH!

**We think the Shade Tree Conference proposal to produce a movie on Tree Preservation is splendid. But—to expect contributions for a $22,500.00 fund would seem to us to require more data than was presented in the only notice we have seen. A prospectus telling who will write the script and supervise the technical details and who will provide these data seems a logical necessity. Why not a full detailed story on this important project in the next issue of TREES?**

TREES Magazine is a bi-monthly Journal published at Olmsted Falls, Ohio, by Edward H. Scanlon, and is devoted to the furtherance of the technical and business administration of Trees (Street and Ornamental); Parks (Municipal and National); and Forests (State, National and Private), in the U. S. Scanlon Publishing Co., 7621 Lewis Rd., Olmsted Falls, Ohio. Subscription by mail $2 per year; outside United States, $2.50. Advertising rates upon inquiry. Closing date for advertising copy—10th of month preceding date of issue. Unsolicited manuscripts must be accompanied by return postage

May-June 1955 **Journal of the National Arborist Association** Vol. 15 No. 4

EDWARD H. SCANLON, Editor
7621 Lewis Rd., Olmsted Falls, Ohio
ADams 5-2357

"No place is complete without trees. A home without trees is charmless; a road without trees is shadeless; a park without trees is purposeless; A COUNTRY WITHOUT TREES IS HOPELESS."

ADVISORY COUNCIL

L. C. CHADWICK
*Professor of Horticulture*
*Ohio State University, Columbus, O.*

H. DANA BOWERS
*State Landscape Engineer*
*Division of Highways*
*Sacramento, Calif.*

MAUNSELL VAN RENSSELAER
*Director, Saratoga Horticultural Foundation*
*Saratoga, Calif.*

NOEL B. WYSONG
*Forester, Cook County Forest Preserve, River Forest, Ill.*

PAUL E. TILFORD
*National Arborist Association*
*Wooster, Ohio*

FORREST C. STRONG
*Assistant Professor of Botany*
*Michigan State College*
*East Lansing, Mich.*

CHARLES F. IRISH
*Arborist, Cleveland, Ohio*

P. P. PIRONE
*New York Botanical Garden*
*New York, N. Y.*

RALPH D. CORNELL
*Landscape Architect, Los Angeles, Calif.*

CURTIS MAY
*Principal Pathologist, Bureau of Plant Industry Station, United States Department of Agriculture, Beltsville, Maryland.*

KARL DRESSEL
*Assoc. Prof. Forestry, Michigan State College*
*East Lansing, Mich.*

MALCOLM A. McKENZIE
*Director, Shade Tree Laboratories*
*University of Massachusetts*
*Amherst, Mass.*

EMANUEL FRITZ
*Associate Professor of Forestry*
*University of California, Berkeley, Calif.*

# Out On A Limb

## STREET TREES NEED SENSE— NOT SENTIMENT

Just shortly before his death Mr. Gifford Pinchot, the Father of American Forestry, published an intriguing book titled "Breaking New Ground". If you haven't read it, do so, by all means. It chronicles the many pitfalls and obstacles, political, financial and technical, that had to be overcome before the U. S. Forest Service and the National Forests came into existence.

Strangely enough one of the major obstacles was that set up by people on the tree side of the battle line, but who were dominated by a blind sentimentality. Their belief was that the National Forests should forever be set aside as "museums"—never to be cut. At this date it is difficult to understand such short sighted thinking. In discussing these people Mr. Pinchot says"—the friends of the forest continually denounced American timberland owners for not doing what was being done abroad. They pointed out that even small twigs and dead branches were utilized in Germany and France, and demanded to know why that should not be done at home. No wonder they were scorned.

"They were utterly right in their purpose, but utterly wrong in their method. Individually they were among our best and most enlightened people—devoted and untiring—but they forgot that you cannot beat something with nothing. They tried to stop the advance of one of the greatest, most necessary, and most thriving and driving of industries simply by explaining to each how wrong and ruthless it was.

"Their eyes were closed to the economic motive behind true Forestry. They hated to see a tree cut down. So do I, and the chances are that you do too. But you cannot practice Forestry without it." He sums it up very much to the point in these words "the job was not to stop the ax, but to regulate its use."

The same thing is happening today at the crossroads of the development of street tree management from a hit and miss political football to the status of a sound scientific governmental function based on economy, practicality and beauty. It is to be expected of course that there will be those who will oppose the swing to commonsense in the selection of the street trees of the future. Their opposition is based on the false hypothesis that "the people" demand the big trees of their forefathers. There can be only one answer to this—those who make the assertion have not tried to plant anything else but the old "green elephants" that have caused so much trouble and conflict in almost every city in the country — at tremendous cost. As a matter of cold fact "the people" are way ahead of these people who can't see the wisdom of plant-

ing trees to fit the space available, and "the people" approve and applaud the common sense approach to the embellishment of streets with trees of a size that will not conflict with sidewalks, sewers, overshade homes and lawn, and disrupt power lines. This we know from an actual intensive campaign of eight years based on the principles of fitting the tree to the space.

If there is room for big trees use them. But in the name of common sense and budget limitations never plant an American elm or a Silver Maple (never plant this anywhere) in a three or six or even a ten foot treelawn with a twenty-five or thirty foot setback. Smaller type trees that will not exceed the limitations of space available are the common sense answer to such predicaments. It sounds nice to say that future generations will not know the "glory" of arched streets of trees—they will if good judgment is used in selecting trees. But if street tree management were to be continued on the old failure proven formula of the past sixty to seventy-five years they will be lucky if there are any street trees large or small.

There is not much sense in buying a Cadillac and then not being able to afford the gas to run it, and while the simile with trees is reversed, cheap trees and expensive maintenance and removal, few cities can be expected to provide the huge budgets necessary to maintain the results of poor unqualified judgment in the continued use of "green elephants"—and few will.

Another important factor in the use of the comparatively few species that have dominated the street tree picture for generations is the danger that lies in epidemics such as the Dutch elm disease and Cankerstain of Sycamore. The two species that have been ravaged by these epidemics have also been two of the most widely, and unwisely, planted species on American streets—principally because they grew fast, were easy to grow and were cheap. A much more extensive list of trees must be employed to reduce the numbers of any one species so that future epidemics should they come will not become the financial nightmares that have been caused by these two destroyers. Also, in using trees that avoid sidewalk and sewer troubles, and which would therefore be considerably smaller in stature, there would be involved far less expensive removal cost should an epidemic strike. This is an all important consideration.

As in the days of Gifford Pinchots' trials and tribulations, the people who today give lip service to the continued creation of old mistakes and monstrosities, are not the City Arborists who know the trouble that has been caused, and you have to be a City Arborist before you can know those problems, but rather they are people not at all qualified by such experience who cry from a false sense of unsound sentiment or commercial crassness.

Our streets can be much more beautiful by using trees that will be in scale with their surroundings — flowering trees, foliage trees, etc.—and this will create with a great majority of the people a pride and love for their street trees. If this were true today, why is every City Arborist hounded and plagued by the citizens to remove the old forest giants that have created such hazards and problems from coast to coast. Ask the man who knows.

## Tribute to Joe Fennell

Throughout Connecticut there are innumerable shrines and gardens which have been lovingly beautified by the skillful care and generosity of Mr. Joseph M. Fennell, Sr., a tree expert of Bridgeport, Conn., who died on March 12, at St. Vincent's Hospital, Bridgeport, Conn. Mr. Fennell was a past president of the Connecticut Tree Association, and fostered the plan to have the white oak adopted as the official tree of Connecticut. He was a member of the National Shade Tree Conference.

Thinking of the beautiful trees planted by Mr. Fennell inspired a Sister of Mercy to write the following lines:

*Wind blows through*
*White pine, yellow pine, hemlock and spruce,*
*Lifting their hands, bowing their heads to produce*
*A Requiem for the soul of the man who could readily see*
*How noble it was to plant a tree.*

—By Sister Mary Antoninus, C.S.M.
St. Mary's Home
Steele Road
West Hartford, Connecticut.

## Harry J. Banker Heads Rutgers Fellowship Council

At a recent meeting of the "Rutgers Shade Tree Fellowship Council," Harry J. Banker of Trees, Inc., 63 Fitzrandolph Road, West Orange, was elected its chairman for a two-year term. Other officers elected were Henry Vaughn-Ames, vice-chairman and Stephen Bachelder, secretary. Messrs. Ernest J. Ricca, Harry L. Birdsall, Edw. Cherpenning and George Vaupel were new appointees to the committee.

The purpose of the Fellowship is as follows: A number of shade tree organizations, municipalities, companies and individuals are interested and as a result they have organized the Rutgers Shade Tree Fellowship Council. This Council has undertaken the financial support of a graduate fellowship, established at Rutgers University, the State University of New Jersey. It is hoped that not only will this one fellowship be continued through the years but that sufficient financial aid will be given so that additional fellowships may be added to establish research along a number of lines at the same time.

Many problems have been with us for a long time, viz: Dutch elm disease and spruce canker; red spider and borer control; combinations of insecticides and fungicides; fertilizer recommendations for trees; proper time and method of tree moving; proper species for street planting. All these problems have been neglected and we hope that the fellowships established by the Council may help to answer some of them.

The entire Fellowship Committee will meet in late June at the College of Agriculture to discuss ways and means of raising an estimated $10,000 needed to meet the expenses of the Fellowship for the next four years.

## Out Of The Rancho Letter Bag

Dear Ed:

In thinking over what happened at the Street Tree and Utility Conference I am convinced that it was a good meeting. I give the following reasons:

1. It was the most friendly group that I ever met with. Every one wanted to know what the other one thought about the troublesome and expensive problem of trying to bring some solution to the present conflict between street trees and utility wires.

2. No one blamed the other one for the problem. Each one was willing to tell his story and to show how it might clear the air of the misunderstandings that have been too common.

3. No one thought that the problem could be solved by spending more money. Everyone seemed to think that money could be saved by the use of cooperation and common sense. I am not Scotch but to me that is the right way of thinking about our troubles.

I was proud to be on the same program with men like Mr. Sayles and the other program members. I was happy to talk to people from all over the United States and I appreciated very much my talks with the understanding men from Canada.

*Joseph A. Sweeney,*
*City Forester,*
*Toledo, Ohio.*

**PLANT AMERICA—WISELY**

Trees...

# Will The Chestnut Return?

By Roger W. Pease
*Department of Horticulture*
*West Virginia University*
*Morgantown, W. Va.*

* * * *

***(This article is based on publications and investigations made by the author at the West Virginia Agricultural Experiment Station, Morgantown, West Virginia.)***

* * * *

**For the photographs appearing in this article the author wishes to acknowledge the cooperation of David Creel, Photographer, West Virginia Agricultural Experiment Station, Morgantown, West Virginia.**

* * * *

***The author inspects an American chestnut seedling bearing in its fifth year.***

Where highways cut through open land along the Allegheny ridges, dead chestnuts stand gray and stark against the sky (Fig. 1), and when the leaves are dropping after early frosts, near the skeleton chestnuts an occasional car is parked, its driver lost in reverie. He is back two generations, stirring the fallen leaves with a stick, gathering the exposed chestnuts to fill a sugar poke pilfered from his mother. For fifty years ago American chestnuts dominated the ridges from Maine to Mississippi and were more intimately connected with the lives of rural people than any other tree. Chestnut rails fenced the cattle, unpainted buildings of chestnut lumber weathered but did not rot, and every fall squirrels, hogs, and children poked in the leaves for the sweet nuts.

It is an old story now. How in 1904 the Asiatic chestnut blight appeared in New York, how it could not be contained by sprays or by cutting and burning infected trees, how it leaped the barriers of clean-cut areas and by 1920 had traveled as far as West Virginia. Giant trees died within five years after infection, and by 1930 the American chestnut had been destroyed throughout the most favorable part of its range. The battle to save the species had been futile and was left to crackpots and congenital optimists.

Meanwhile interest had been shifting to Asia, where chestnuts were thriving in spite of the blight. Nuts from fine specimens had been imported and were being grown into young trees. A hybridization program was under way, and by 1945 optimistic news releases had created enthusiasm among the public. The new blight-resistant "strains" of mixed and Chinese parentage had been distributed, commercial nurserymen dealt in resistant chestnut trees, and state conservation commissions grew thousands as a source of game food. The large-scale production and sale of American grown chestnuts for table use and the rejuvenation of the chestnut forests along the Allegheny uplands seemed to be just around the corner; but each passing year found both hopefully around the corner—well out of sight.

Although results are, by and large encouraging, progess has been exaggerated by an over-optimistic interpretation of *resistant* on the part of people and handicapped by stubborn innate traits on the part of chestnuts.

There are degrees of resistance and resistance is not immunity. A highly resistant chestnut tree may overcome the blight, one mildly resistant will suffer from infection and die, but an immune tree will show no reaction to blight spores repeatedly injected into its tissue. Reputable sources have not claimed blight immunity for seedlings of even the most promising Asiatic chestnut trees, and seedlings of selected, timber-type "strains" established in areas heavily infested with blight can be expected to show about twenty-five per cent infection after a period of ten to fifteen years. Some may die. Actually this is a good performance, but it differs sharply from popular belief. In a planting of seedlings from an orchard type "strain," selected for spreading growth habits, nut quality, and resistance, a similar variation exists. Some trees will bear unpalatable nuts, others will spindle into timber-type growth.

Chestnuts are peculiar in their habits of blossom formation and of pollination. Two kinds of blossoms are developed on the same tree, often on the same twig. One is a catkin of male or pollen-bearing flowers, and the other is a burrlike female or seed forming flowers. (Fig. 2). Yet female flowers will not develop seeds unless they receive pollen from another tree. Thus the best tree in a planting may cross with the worst. Under these circumstances wide variations among seedlings should be expected.

In similar situations nurserymen produce young trees by grafting or by some other method of vegetative propagation. However, the most exasperating trait of chestnuts is their reaction to such methods. They are not difficult to graft—and grafted trees are being sold—but sooner or later the graft unions tend to become defective, and the trees die. Cuttings from new-growth shoots have been rooted—but rooted cuttings have not been grown into trees.

But what has become of the American chestnut which was left to its fate so many years ago? It is "down but not out." Old trees are forming annual crops of nuts. Some have fought blight infection since the twenties and still show green crowns of foliage. (Fig. 3). Great winds are causing more damage to these old warriors than is the blight, for every year a few are toppled over. Though they are fighting cankers at the base of limbs and on the trunks (Fig. 4), it is peculiar that terminal branches are seldom infected.

Occasional seedlings appear in heavily infested areas, grow tall and straight, fight off the blight, and join the older trees in the battle (Fig. 5). A few of these seedlings show marks of healed blight cankers, but sooner or later they contract the disease. Some survive until their trunks are more than six inches in diameter.

Innumerable sprouts shoot up around old stumps. Most succumb quickly (Fig. 6), but a few reach bearing age and survive many years. Along roadsides the sucker growth persists in spite of being mowed; along the borders of woodlands

***(Continued on Page 16)***

# Sydney Museum Cultivates Eucalyptus Plantations

By Peter Davison
*Australian News and Information Bureau, New York City*

Since eucalyptus trees are one of the most common features of the Australian countryside, growing in great profusion, it may seem strange to find them being specially grown today in man-made plantations.

They have been planted in this way near Sydney, New South Wales. The scientific staff of the Sydney Museum of Applied Arts and Sciences has cultivated acres of these beautiful trees in long neat rows. Not far away are thousands of others growing naturally in forest lands.

The Museum's interest lies in the aromatic leaves of the eucalypts—popularly, but erroneously called "gum trees"—for they yield essential oils for the manufacture of medicines, perfumes and germicides. Their use also extends to various industrial processes.

Controlled plantations have been developed by the Museum simply to improve the yield and quality of these oils, mainly by careful breeding and selection.

Following the lead given by the Museum, manufacturers interested in the products of the eucalypts have established eucalyptus plantations of their own in various parts of Australia.

In the great Australian forests the Museum staff has gathered seed from robust trees whose oils have been obtained in high yield and of good quality. These have then been sown in experimental plantations near Sydney. The ultimate aim is to use the seed from these plantations for establishing large commercial plantations. Valuable information will also be obtained as to the rate of growth, fertilizing methods, procedure of cutting and other vital data.

There are over 700 species and varieties of eucalypts in Australia. Some 200 of these have been examined, but fewer than 20 yield oil of commercial importance.

The scientific staff of the Museum of Applied Arts and Sciences, recognized authority for investigations into essential oils, has been engaged in the work for over 60 years, in the course of which it has gained a great deal of scientific knowledge and rendered valuable assistance to the essential oil industry both inside Australia and overseas.

The principal species which have been investigated are: *E. polybractea,* which has a higher yield of cineole than any other commercial eucalyptus oil used for pharmaceutical purposes; *E. australiana,* another cineole yielder; *E. phellandra,* consisting mainly of phellandrene and cineole and used in the preparation of non-toxic disinfectants, as well as for the separation of minerals by flotation processes; *E. dives,* noted for its strong peppermint odor, containing phellandrene and about 50% of a yellow liquid called piperitone.

*A picturesque old specimen of Sugar Gum (E. corynocalyx) growing in the Pacific Palisades area outside of Santa Monica, Calif.*

*Scientists carry out periodic laboratory tests on leaves harvested from their own plantation to assure that trees produce oil true to species.*

Eucalyptus oils themselves are used in industry for the separation of various minerals by flotation processes and for the manufacture of disinfectants. Such disinfectants have been found to be many times more powerful than carbolic acid.

Piperitone is converted into synthetic thymol and menthol. Thymol is one of the best preservatives known, particularly for gums, pastes, glues, distempers, furs and other items. It is also used medicinally as an antiseptic and as an ointment for skin complaints. The other synthetic product, menthol, is used for local anesthetics, in dental plates and as a flavoring in confectionery.

Both synthetic thymol and menthol are used by the fine chemical manufacturers of the world, while factories for their production have been established in Perth and Sydney, much of the output being exported to other countries.

*E. macarthuri* is an unusual eucalypt for it yields an oil containing geranyl acetate, a combination of an attar of rose constituent known as geraniol, with acetic acid. It has a pleasant odor, totally different in character from any other eucalyptus oils. It is used for certain types of perfume and for the denaturing of alcohol for perfumes.

*E. citriodora* yields a lemon-scented oil rich in citronellal. This constituent is converted into citronellol which has a strong rose odor.

Four other commercial species, *E.*

*Turn Page*

*When about three years old and roughly 20 feet high the eucalypts are cut close to the ground and the first harvest gathered. The following year the stumps will produce a prolific growth of new branchlets, which in time will produce more leaf and a higher yield of oil than they would if the tree were allowed to grow naturally. Only the leaves and branchlets are pruned for distilling.*

*Checking the growth of young Eucalyptus trees at the Museums plantation near Sydney.*

*—Photos courtesy Australian News and Information Bureau*

*cneorifolia, E. elaeophora, E. sideroxylon* and *E. leucoxylon*, are also exploited for their oils which are rich in cineole.

The method of producing these oils from the foliage of eucalyptus trees has changed little during the past century. The distiller selects a suitable forest and there establishes a still consisting usually of one or two 400-gallon tanks, suitably set up with firebox and condensers. When the trees have been cut—to within two feet of ground level or sometimes to ground level—the leaves and terminal branchlets are removed with a broad-bladed knife, and the foliage then placed in the still. Some 50 to 100 gallons of water are added, a fire lit beneath and the oil obtained by simple distillation.

The crude oil is then sent to the manufacturer for refining, subsequently to be exported in its refined state or else converted into other more valuable products. On an average, 1,000 lb. of weight of leaves and terminal branchlets from the principal species yields 30 to 40 lb. of oil. On today's market (1954), that is worth between $17.92 to $26.88, according to the species. Exceptions are *E. citriodora* and *E. macarthuri*, the former yielding only about 10 lb. of oil to 1,000 lb. of foliage, and the latter about 2 lb.

Although it is a hard and lonely life working at these distilleries away in the bush, men can earn up to $67.20 a week. Today bush distillation is gradually being supplanted by more modern units, using steam boilers. As a result selection, breeding and close cultivation will prove much more economical, the work taking its place among other valuable agricultural activities.

In the experimental plantations trees are planted in rows eight feet apart. Some three years later, when the saplings have grown to something like 20 feet, they are cut close to the ground and the first harvest gathered. Weather conditions permitting, a vigorous growth of suckers begins to sprout from the stumps within a few weeks. This new growth may be cut within three years, and invariably it gives a higher yield to foliage per tree than the original growth.

The only cultivation the crop requires is an occasional mechanical hoeing, and watering of seedlings in a dry season.

There are other types of trees in the Australian bushland which also yield essential oils. These are the "ti-trees" (*Leptospermum* and *Melaleuca* species), boronias, sandalwood, and the Huon pine.

Four species of "ti trees" are used in the commercial production of oil. Two of the most notable are *Leptospermum citratum*, which possesses a strong lemon odour and is used for the manufacture of lemon essence, rose perfume and synthetic violet perfume, and *Melaleuca alternifolia* which yields an oil with a pronounced nutmeg odour. This oil is non-poisonous and non-corrosive, and is used extensively in medical and dental preparations.

There is also a large "ti-tree" commonly known as "paper bark", *Melaleuca viridiflora*. Two different varieties exist, one yielding a camphor-like oil with a eucalyptus smell, and the other having a rose-like odour. The papery bark of this tree is used as an insulating material and also in linoleum manufacture, *Malaleuca ericifolia*, another small "ti tree" growing in the swamps, yields an oil rich in linalool, a valuable perfume constituent of the Lily-of-the-Valley type.

Oil from the Western Australian sandalwood is distilled from the stems, roots and butts. Its main use is in the

*(Continued on Page 22)*

# BIG TREES AND ARBOR DAY

During the past year the New York State Arborists have been looking for the largest American elm tree in New York State. The search took the form of a contest or survey, with first prize $25, second prize Fenska's new book "Tree Experts Handbook" and third prize a year's subscription to Trees Magazine.

Trees are customarily judged on the basis of trunk circumference 4½ feet above the ground together with the spread of the branches and height of the tree. Tree circumference reflects the total growth of the tree combining the effect of soil moisture and fertility, freedom from shade and competition; also freedom from disease and insect pests, which reduce the foliage year after year. Damage from storms breaking the limbs and trunk seriously interfere with tree growth and unless properly cared for permit entrance of decay which seriously weakens the American elm.

Of the twelve large trees reported during the contest, many were good size trees before early colonial times. These large trees have survived in rural surroundings in moist soil and without interference to the roots by installation of roads, sewers, walks or buildings. In general, they occupy sheltered locations so that storm damage is at a minimum.

These large trees have served as line trees or were of special civic interest and hence have been spared the woodsman's axe or saw. The Gerry elm was protected by the owner driving nails into the tree at one time to forestall its being cut down for lumber.

Trees of smaller size 10 to 16 feet in girth are large elms as we know the American elm today and may be regarded as at the peak of their beauty and value. Most elms of 10 foot girth respond to proper maintenance procedures of pruning, bracing and protection from pests and disease. Such trees are likely to be 150 to 300 years old and have a life expectancy of double that figure under ideal cultural conditions. The special precautions recommended to forestall Dutch Elm Disease would be of significance for fine specimens of the American elm. Cornell Extension Bulletin 932 on "Control of the Dutch Elm Disease" gives present recommendations for the care of the American elm in New York State. Removal and destruction of all recently dead limbs (hurricane damaged) in the specimen elm and for a radius of 700 feet from the specimen is an important and necessary phase of control of the Dutch Elm Disease.

*Sandy Creek - Boylston Town Line Elm in Oswego Co., is a fine example of a typical tree It has a circumference of 14' 5" and is 118' tall.*

The largest of the ten trees reported in the present survey by the New York State Arborists Association is 23 feet 4 inches in girth, 110 x 120 feet in spread and approximately 85 feet in height. The tree is known as the Bellinger Line Tree and is located on the Bellinger Farm south of Sharon (U. S. Route 20) in Schoharie County. This is the second record on this particular tree by Mr. H. B. Littlefield, Department of Conservation at Albany. The first report dated August, 1941 indicated that the Bellinger Line Tree was 21 feet, four inches in girth at that time. This large elm is in good condition for a tree of its size and age. It has received no special care but is located in moist soil along a fence row in a pasture. The Bellinger Line elm has thus grown considerably in the past 14 years.

During the survey an attempt was made to locate as many of the famous elms of New York as possible. Most of these famous trees have fallen in storms or other catastrophies. The Gowanda elm sometimes reported the largest of all and 39 feet in circumference near the ground is gone. The Markham elm near Rush, N. Y., in Monroe County was found to be still alive but long since past its prime. The following quotation from the Rochester Democrat and Chronicle of May 13, 1888 gives some indication of the tremendous size of the Markham elm.

"Penn's famous Treaty Elm at Philadelphia was 24 feet in circumference. The Hartford Charter Oak at Hartford, Conn., one foot above the ground measured 25 feet. The Rhode Island Sycamore twelve inches above the ground measured 32 feet. When Lessing, the historian, visited the Big Elm, or Geat Elm, at Geneseo in 1857, he found that it measured 26 feet, nine inches in circumference, and he estimated its age as exceeding one thousand years. The trunk of the Markham elm at the smallest place below the branches was a little over 11 feet in diameter. Its circumference just below the branches was 38 feet; three feet above the ground it measured 45 feet. At noon the foliage shaded an acre of ground. The limbs were remarkably long and slender, the ends hanging down like ropes of trailing vines. Pioneer boys and girls made the flats a playground, where they often tied together the ends of the pendant branches which they used as swings. Mr. Markham says that one who had ever seen the tree could form no idea of the weeping willow characteristics possessed by the old elm; they were of such an exaggerated type, that in a tour around the world he saw nothing to equal it.

"During a January thaw in 1852 a party of sportsmen accidentally set fire to the tree by shooting at an animal that had taken refuge in a small decayed hollow. The fire was not extinguished, and the water, which was then rising

*(Continued on Page 18)*

# DETERMINING THE VALUE OF SHADE TREES

*Foreword*

At the 23rd National Shade Tree Conference action was taken requesting the Conference together with the National Arborist Association to work out a method for arriving at the value of shade trees. A joint committee was appointed with Norman Armstrong as chairman. Others who have served on the committee all or part of the time since its formation in 1946 are as follows: Vance I. Shield, Ray Gustin, Jr., Fred W. Roewekamp, Oscar F. Warner, John Weall, Orville Spicer, O. J. Andersen and L. C. Chadwick.

Since the reports are scattered through several volumes of the Conference Proceedings (27th, 29th and 30th), the essential parts for using the suggested method of evaluating shade trees are assembled and presented in this form as a service to National Arborist Association members. Classification of trees of Regions VI—Western and VII—Canadian has not been completed. When finished those classifications can be added to the lists given here. Paul E. Tilford, Executive Secretary, National Arborist Association, P. O. Box 426, Wooster, Ohio.

*Method of Evaluating Shade Trees*

In determining tree value one basic factor must be the size of the tree. The best method of measuring size seems to be by computing the number of square inches in a cross section of the trunk. This is done by squaring the radius and multiplying that figure by 3.1416. Thus if the trunk diameter is 20 inches, the radius is 10 inches and its square is 100 inches. Multiplying that by 3.1416 gives the cross section area, 314.16 inches.

The value of our dollar varies with conditions and no price set upon a tree will remain constant. It is the opinion of your committee that at the present time the *conservative value of a perfect specimen shade tree is $5.00 per square inch of trunk cross section.* This gives the 20-inche tree a value of $1570.80.

Not all species and varieties of shade trees are of equal value. It is necessary that a list of trees growing in each section of the country be compiled and that those be grouped into classes based on relative value. It is the committee's suggestion that five groups be made and numbered—the trees in group No. 1 to be valued at 100%, in group No. 2 at 80%, in group No. 3 at 60%, in group No. 4 at 40% and those in group No. 5 at 20%.

Thus if our 20-inch tree were in group No. 1 its value would be $1,570.80, but if it were in group No. 3, the value would be reduced to $942.48.

Not all shade trees are perfect specimens. The person making an appraisal must judge how nearly each tree approaches that which we call a perfect specimen. In this matter we again suggest five groups with values of 100%, 80%, 60%, 40% and 20%. Thus if our 20-inch tree is in species No. 1 class and in perfect condition, both as to its health and form, its value will stand at $1,570.80. Should it be irregular in form and its vitality somewhat reduced, it might be placed in the third, or 60% of perfect class and thus be valued at $942.48. Should it also be in condition class No. 3, as well as species class 3, the value would be 60% of $942.48 or $565.49.

For the sake of simplicity we think fractions and odd cents can be ignored and the figures kept in even dollars.

Instances will undoubtedly be encountered of such remarkable specimens that the basic value should be increased. This is a matter for the appraiser's judgment as is the determination of the Condition Class of any tree.

Any means or formula for evaluating shade trees must be flexible, and this is probably the most flexible formula of any kind ever devised. Always the judgment and opinions of the individual will be a large, if not the largest, factor. Thus, if you wish to consider matters not included in this formula, such as effect of land value, or any other factor you believe to apply, go ahead and apply it to the figure reached by the use of this formula.

It is the recommendation of the committee that the President of the National Shade Tree Conference appoint a subcommittee in each region of the Conference to classify the trees of that region in respect to the relative values of species and varieties.

If this be done, and this report adopted by the Conference, we will have an evaluation method which is uniform up to a certain point where judgment of the individual appraiser must take over completely. We do not believe it possible to standardize further.

We have suggested a setup for a work sheet which is part of the report. In case of very large trees the values seem high but by the time the tree gets to an age to reach such diameters, it is quite probable that the condition of the tree is such that you would have to reduce it in the Condition Class, and therefore, bring those values down. If the tree had attained that size and was absolutely perfect, it is worth that kind of money and a great deal more, so I think it will average out on the whole reasonably well.

Should our money depreciate more, we would just have to raise the unit price to $6 or $7. If our money increases in value, we can reduce it.

*Classification of Trees by Regions*

Region I — New England — Conn., Maine, Mass., N. H., R. I., Vermont.

Region II—Eastern—N. J,, N. Y.,

**SUGGESTED SET-UP OF WORK SHEETS**

| Species and Variety | Diameter of trunk in inches | Sq. Inches in cross section | Basic value in Dollars* | Species and Variety Class | Condition Class | Value of Trees Dollars |
|---|---|---|---|---|---|---|
| | | | | 1-100%<br>2- 80%<br>3- 60%<br>4- 40%<br>5- 20% | 1-100%<br>2- 80%<br>3- 60%<br>4- 40%<br>5- 20% | |
| | | | Sample Cases | | | |
| White Oak | 20 | 314 | 1570 | 1-100% | 3- 60% | $942.00 |
| Black Locust | 20 | 314 | 1570 | 5- 20% | 4- 40% | 125.00 |

*** Basic value in dollars of tree with different trunk diameters: 2 in.—$15, 4 in.—$63, 6 in.—$142, 8 in.—$252, 10 in.—$393, 12 in.—$566, 14 in.—$770, 16 in.—$1005, 18 in.—$1272, 20 in.—$1570, 30 in.—$3534, 40 in.—$6283.**

Pa.

Region III—Southern — Ala., Del., D. C., Fla., Ga., La., Md., Miss., N. C., S. C., Tenn., Texas, Va., W. Va.

Region IV—Central — Ind., Ky., Mich., Ohio.

Region V—Midwestern—Ark., Colo., Iowa, Kan., Minn., Mo., Neb., Okla., Wis.

Region VI—Western—Ariz., Calif., Idaho, Mont., N. M., Ore., Utah, Wash., British Columbia, Canada.

It is impossible to classify the trees in proportion to their relative values so that anyone can use the classification without question. Also, the particular area and location in which the tree grows as well as the judgment of the individual making the evaluation must come into account. The following lists are not intended to be hard and fast but simply something to serve as a guide.

## TREES OF REGION I— NEW ENGLAND

Class No. 1—100%

*Pinus strobus* — white pine, *Tsuga canadensis*—hemlock, *Fagus grandiflora* American beech, *Quercus alba*—white oak, *Quercus bicolor*—swamp white oak, *Quercus borealis* — northern red oak, *Quercus palustris* — pin oak, *Quercus coccinea*—scarlet oak, *Liriodendron tulipifera* — tuliptree, *Amelanchier canadensis*—shad bush, *Gleditsia triacanthos* —honey locust, *Nyssa sylvatica*—black gum, *Betula alba* — European white birch.

Class No. 2—80%

*Pinus resinosa*—red pine, *Picea mariana*—black spruce, *Populus candicans*—balm of Gilead, *Juglans nigra*—black walnut, *Carya ovata*—shagbark hickory, *Carya alba*—mockernut, *Carya glabra* —pignut, *Carya cordiformis*—bitternut, *Betula lenta*—sweet birch, *Betula nigra* —river birch, *Quercus muhlenbergii* — chestnut oak, *Sassafras variifolium*—sassafras, *Pyrus communis*—pear, *Malus sylvestris* — apple, *Sorbus aucuparia* — European mountain ash, *Acer rubrum*— red maple, *Fraxinus americana*—white ash, *Fraxinus pennsylvanica*—red ash, *Fraxinus pennsylvanica lanceolata* — green ash, *Fraxinus nigra*—black ash.

Class No. 3—60%

*Picea canadensis*—white spruce, *Salix nigra*—black willow, *Salix lucida* — shining willow, *Salix fragilis* — crack willow, *Salix alba*—golden osier, *Salix babylonica* — weeping willow, *Populus tremuloides*—trembling aspen, *Populus balsamifera* — balsam poplar, *Populus deltoides*—eastern cottonwood, *Betula lutea*—yellow birch, *Quercus prinus*—swamp chestnut oak, *Quercus velutina*—black oak, *Platanus occidentalis*—sycamore, *Sorbus americana* — American mountain ash, *Aesculus*—horse chestnut, *Tilia americana*—basswood.

Class No. 4—40%

*Pinus banksiana* — jack pine, *Larix laricina* — tamarack, *Picea rubra* — red spruce, *Albies balsamea*—balsam fir, *Populus alba*—white poplar, *Populus grandidentata* — largetooth aspen, *Betula populifolia* — gray birch, *Ulmus americana*—American elm, *Ulmus racemosa*—rock elm, *Morus rubra*—red mulbery, *Morus alba* — white mulberry, *Prunus serotina*—wild black cherry, *Robinia pseudocacia*—black locust, *Ailanthus glandulosa* — ailanthus, *Acer saccharinum*—silver maple.

Class No. 5—20%

*Pinus rigida*—pitch pine, *Juglans cinera*—butternut, *Ulmas fulva*—slippery elm, *Acer negundo*—box elder, *Catalpa bignonioides*—catalpa.

## TREES OF REGION II— EASTERN

Class No. 1—100%

*Acer rubrum*—red maple, *Acer saccharum*—sugar maple, *Acer platanoides ascendens*—erect Norway maple, *Carpinus caroliniana*—American hornbeam, *Cercidiphyllum japonica*—Katsura tree, *Cornus florida* — dogwood, *Crataegus oxyacantha Paulii*—Paul's scarlet thorn, *Crataegus phaenopyrum* — Washington thorn, *Fagus grandifolia* — American beech *Fagus sylvatica var.* — European beech, *Ginkgo biloba var.* — ginkgo, *Gleditsia triacanthos moraine* —honey locust (thornless), *Ilex opaca* American holly, *Magnolia acuminata* cucumber tree, *Malus sp. & var.* — *flowering crab apple, Oxydendrum arboreum* — sourwood, *Quercus alba*—white oak, *Quercus borealis*—red oak, *Quercus imbricaria*—shingle oak, *Quercus palustris* — pin oak, *Quercus phellos*—willow oak, *Quercus shumardi* shumard oak, *Taxodium distichum*—bald cypress, *Tsuga canadensis* — hemlock, *Ulmus americana*—American elm.

Class No. 2—80%

*Acer platanoides* — Norway maple, *Acer platanoides Schwedleri*—Schwedler maple, *Aesculus carnea*—pink horse chestnut, *Aesculus hippocastanum* — horse chestnut, *Amelanchier canadensis* —shad bush, *Carya ovata*—shagbark hickory, *Cladrastus lutea*—yellow wood, *Crataegus sp.* — hawthorns, *Fraxinus americana*—white ash, *Fraxinus pennsylvanica*—green ash, *Juglans nigra*—black walnut, *Koelreuteria paniculata*—goldenrain-tree, *Liquidambar styraciflua* —sweet-gum, *Liriodendron tulipifera*—tulip-tree, *Nyssa sylvatica*—black gum, *Phellodendron amurense*—Amur corktree, *Pinus strobus* — white pine, *Platanus acerifolia* — London plane, *Platanus occidentalis* — sycamore, *Quercus coccinea*—scarlet oak, *Quercus bicolor* — swamp white oak, *Quercus lyrata*—overcup oak, *Quercus prinus*—swamp chestnut oak, *Sophora japonica* —scholartree, *Tilia cordata*—little-leaf linden.

Class No. 3—60%

*Acer pseudoplatanus* — sycamore maple, *Aesculus glabra*—Ohio buckeye, *Betula lutea*—yellow birch, *Betula populifolia*—grey birch, *Carya sp.*—hickories, *Celtis occidentalis* — hackberry, *Cercis canadensis*—redbud, *Diospyros virginiana*—persimmon, *Gleditsia triacanthos*—common honey-locust, *Gymnocladus dioicus*—Ky. coffee-tree, *Ostrya virginiana* — American hop-hornbeam, *Picea pungens*—blue spruce, *Pinus nigra* — Austrian pine, *Pinus resinosa*—red pine, *Quercus robur fastigiata*—upright English oak, *Quercus montana* — chestnut oak, *Quercus stellata* — post oak, *Quercus macrocarpa* — mossycup oak, *Sassafras albidum* — sassafras, *Tilia americana*—basswood, *Ulmus procera*—English elm.

Class No. 4—40%

*Acer saccharinum*—silver maple, *Asimina triloba*—pawpaw, *Maclura pomifera*—osage-orange, *Morus sp.*—mulberry, *Picea abies*—Norway spruce, *Robinia pseudoacacia*—black locust, *Salix babylonica*—weeping willow.

Class No. 5—20%

*Acer negundo*—box elder, *Ailanthus altissima* — ailanthus, *Catalpa bignonioides*—catalpa, *Populus deltoides*—Carolina poplar, *Populus nigra*—Lombardy poplar, *Salix sp.*—willows, *Ulmus pumila*—Siberian elm.

## TREES OF REGION III— SOUTHERN

Class No. 1—100%

*Acer rubrum* — Red Maple, *Cornus florida* — Flowering Dogwood, *Fagus sylvatica*—European Beech, *Fagus grandifolia*—American Beech, *Ginko biloba* —Ginkgo, *Gleditsia triacanthos*—Moraine Honeylocust (Pat. 836), *Ilex opaca*—American Holly, *Magnolia grandiflora*—Southern Magnolia, *Pinus palustris*—Long Leaf Pine, *Pinus taeda*—Loblolly Pine, *Quercus alba* — White Oak, *Quercus coccinea*—Scarlet Oak, *Quercus imbricaria*—Shingle Oak, *Quercus laurifolia* — Laurel Oak, *Quercus lyrata*—Overcup Oak, *Quercus macrocarpa*—Bur Oak, *Quercus phellos*—Willow Oak, *Quercus shumardi*—Shumard Oak, *Quercus virgiana* — Live Oak.

Class No. 2—80%

*Acer saccharum*—Sugar Maple, *Acer floridanum* — Florida Sugar Maple, *Gleditsia triacanthos*—Common Thornless Honeylocust, *Hickoria pecan* — Pecan, *Juglans nigra* — Black Walnut, *Koelreuteria paniculata* — Goldenraintree, *Liquidambar styraciflua*—American Sweetgum, *Liriodendron tulipifera* — Tuliptree, *Nyssa sylvatica* — Black Gum, *Pinus strobus*—Eastern White Pine, *Quercus prinus*—Chestnut Oak, *Taxodium distichum* — Baldcypress, *Tsuga canadensis*—Canadian Hemlock,

*(Continued on Next Page)*

**Patronize the Advertisers and mention TREES**

# Trees...


WORK GOES
FASTER, EASIER
with SEYMOUR SMITH tools

The choice of tree men for generations

PROFESSIONAL PRUNER

| No. 123 7" | No. 124 8" | No. 125 9" |
|---|---|---|
| $3.25 | $3.50 | $4.00 |

The standard pruner for the expert. Also, the finest of them all, No. 90, 8", $5.50

SNAP-CUT PRUNER
No. 119 8" $2.95

The original, famous "SNAP-CUT". Razor sharp blade acts on non-dulling metal anvil.

LOPPING SHEARS

6 models to choose from. Cut up to 2" branches with ease.

NEW, FINEST EVER
PRUNING SAWS

A new Seymour Smith development — the fastest, easiest cutters on the market. Complete line of 6 models covering all requirements up to chain saw work.
Tree Pruners and Pole Saws also available.

FREE: Send for full descriptive matter and prices on all Seymour Smith products for professional pruning and tree care.
Prices slightly higher Denver and West

SEYMOUR SMITH
OUR 105th YEAR
The Line of Quality

DEALER'S INQUIRIES SOLICITED
SEYMOUR SMITH & SON, Inc.
4605 Main St. Oakville, Conn.


*Tsgua caroliniana*—Carolina Hemlock, *Ulmus alata* — Winged Elm, *Ulmus Americana*—American or White Elm, *Ulmus crassifolia*—Cedar Elm, *Ulmus racemosa*—Rock Elm.

Class No. 3—60%

*Acer platanoides* — Norway Maple, *Amelanchier canadensis* — Shadblow Serviceberry, *Aesculus glabra* — Ohio Buckeye, *Aesculus hippocastanum* — Horsechestnut, *Carpinus caoliniana* — American hornbeam *Cedrus atlantica*—Atlas Cedar, *Cedrus libani*—Cedar-of-Lebanon, *Cladrastis lutea* — American Yellowwood, *Fraxinus americana* — White Ash, *Hicoria var*—the Hickories, *Magnolia virginiana*—Sweetbay Magnolia, *Oxydendrum arboreum* — Sourwood, *Ostrya virginiana* — Eastern Hophornbeam, *Platanus occidentalis* — American Sycamore, *Quercus rubra*—Southern Red Oak, *Salix babylonica*—Babylon Weeping Willow, *Sassafras varifolium*—Sassafras.

Class No. 4—40%

*Celtis occidentalis*—Hackberry, *Fraxinis viridis*—Green Ash, *Maclura pomifera*—Osageorange, *Magnolia acuminata* — Cucumbertree Magnolia, *Quercus marilandica*—Blackjack Oak, *Quercus nigra*—Water Oak, *Quercus stellata*—Post Oak, *Tilia cordata* — Littleleaf Linden.

Class No. 5—20%

*Acer negundo*—Box Elder, *Acer saccharinum*—Silver Maple, *Ailanthus altissima*—Tree of Heaven, *Catalpa catalpa*—Catalpa, *Cercis canadensis* — Redbud, *Diospyros virginiana*—Persimmon, *Laurocerasus caroliniana*—Laurel Cherry, *Melia azedarach*—Chinaberry, *Morus rubra*—Red Mulberry, *Pinus echinata*—Short Leafed Pine, *Populus deltoides* — Carolina Poplar, *Populus Heterophylla* — Cottonwood, *Quercus maxima*—Northern Red Oak, *Quercus palustris*—Pin Oak, *Robinia pseudoacacia*—Black Locust, *Salix nigra*—Black Willow, *Ulmus pumila*—Siberian Elm.

## TREES OF REGION IV—CENTRAL

Class No. 1—100%

Large Trees—mostly 60′ and above.

*Acer platanoides* — Norway Maple, *Acer saccharum*—Sugar Maple, *Gleditsia triacanthos*—Moraine Honeylocust, *Liquidambar styraciflua* — American Sweetgum, *Nyssa sylvatica*—Black Tupelo (gum), *Quercus alba*—White Oak, *Quercus borealis maxima*—Eastern Red Oak, *Quercus coccinea* — Scarlet Oak, *Quercus imbricaria* — Shingle Oak, *Quercus shumardi schnecki* — Schneck Oak, *Ulmus americana*—American Elm, *Ulmus carpinifolia sarniensis*—Wheatleyi Smooth-leafed Elm.

Medium Trees—mostly 30′ to 45′

*Acer platanoides ascendens* — Erect Norway Maple, *Cladrastis lutea*—American Yellowwood, *Ginkgo biloba fasti-*

Our business is stump removal without costly damage to curbs, sidewalks and cables. Developed after years of research, here is the inexpensive, practical answer to your removal problems.

O'BRIEN STUMP CUTTER

tested and proven for performanace AND ECONOMY!

NO MORE BLASTING, BURNING, DIGGING . . . AND CUTS COSTS!

With this one-man machine, mountable on almost any tractor, you can realize up to 75% in labor savings. The O'Brien Stump Cutter will cut out any size stump below the level of sidewalk or lawn area and reduce it to shavings. Compare these fast, low cost results with the old-fashioned stump removal methods.

Write For Complete Details!

DISTRIBUTOR INQUIRIES INVITED

Metal Parts Machining Corp.
WATERVLIET NEW YORK

*giata*—Sentry Ginko, *Ostrya virginiana* —Eastern Hophornbeam, *Phellodendron amurense*—Amur Corktree, *Phellodendron lavallei* — Lavalle Corktree, *Phellodendron sachalinense* — Sakhalin Corktree, *Quercus acutissima* — Sawtooth Oak, *Quercus phellos*—Willow Oak, *Tilia cordata*—Littleleaf Linden.

Small Trees—mostly 20′ to 30′

*Acer buergerianum*—Trident Maple, *Acer mono*—Mono Maple, *Acer tataricum*—Tatarian Maple, *Carpinus betulus fastigiata*—Pyramid European Hornbeam, *Cornus florida*—Flowering Dogwood, *Cornus officinalis*—Japanese Cornel Dogwood, *Crataegus phaenopyrum (cordata)* — Washington Hawthorn, *Koelreuteria paniculata* — Goldenraintree, *Magnolia soulangeana* — Saucer Magnolia, *Malus* species and varieties—Flowering crab apples.

Class No. 2—80%

Large Trees—mostly 60′ or above

*Acer platanoides,* Crimson King — Crimson King Maple, *Acer rubrum*—Red Maple, *Acer rubrum schlesingeri*—Red Maple, *Fagus grandifolia*—American Beech, *Fagus sylvatica*—European Beech, *Fagus sylvatica heterophyla* — European Cutleaf Beech, *Ginkgo biloba* —Ginkgo, *Gymnocladus dioicus*—Kentucky Coffee-tree, *Liriodendron tulipifera*—Tuliptree, *Magnolia acuminata*—Cucumber Magnolia, *Platanus acerifolia* —London Plane-Tree, *Quercus palustris*—Pin Oak, *Quercus montana* — Chestnut Oak, *Quercus velutina*—Black Oak, *Sophora japonica*—Japanese Pagodatree, *Tilia euchlora*—Crimean Linden, *Tilia petiolaris*—Silverpendent Linden, *Tilia tomentosa*—Silver Linden, *Ulmus procera (campestris)*—English Elm.

Medium Trees—mostly 30′ to 45′

*Acer campestre* — English Maple, *Acer rubrum columnare*—Column Red Maple, *Acer saccharum,* upright—Upright Sugar Maple, *Aesculus carnea brioti*—Ruby Red Horsechestnut, *Betula nigra*—River Birch, *Carpinus caroliniana*—American Hornbeam, *Cercidiphyllum japonicum*—Katsuratree, *Eucommia ulmoides* — Eucommia, *Magnolia kobus borealis*—Large Kobus Magnolia, *Pseudolarix amabilis* — Lovely Golden Larch, *Quercus muhlenbergi*—Chinkapin Oak, *Quercus robur*—English Oak, *Quercus robur fastigiata* — Pyramidal English Oak, *Sassafras albidum molle*—Silky Sassafras, *Ulmus parvifolia* — Asiatic Elm, *Zelkova serrata*—Japanese Keaki tree.

Small Trees—20′ to 30′

*Acer circinatum*—Vine Maple, *Acer diabolicum*—Devil Maple, *Acer ginnala* —Amur Maple, *Acer griseum*—Paperbark Maple, *Acer tschonoski rubripes*—*Amalanchier laevis*—Alleghany Service Berry, *Cercis canadensis*—Eastern Red Bud, *Cercis canadensis alba* — White Redbud, *Cornus alternifolia* — Pagoda Dogwood, *Crataegus succulenta*—Fleshy Hawthorn, *Euonymus maacki*—Maack Euonymus, *Magnolia kobus* — Kobus Magnolia, *Magnolia liliflora nigra* — *Magnolia virginiana (glauca)*—Sweetbay, *Prunus* species & varieties—Flowering cherries, *Syringa amurensis japonica* —Japanese Tree Lilac.

Class No. 3—60%

Large Trees—mostly 60′ or above

*Acer pseudoplatanus* — Sycamore Maple, *Celtis laevigata (mississippiensis)* —Sugar Hackberry, *Celtis occidentalis* —Common Hackberry, *Fraxinus americana*—White Ash, *Fraxinus pennsylvanica lanceolata*—Green Ash, *Fraxinus quadrangulata* — Blue Ash, *Kalopanax pictus*— *Larix leptolepsis*—Japanese Larch, *Quercus laurifolia* — Laurel Oak, *Salix elegantissima*—Thurlow Weeping Willow, *Taxodium distichum*—Bald Cypress, *Tilia platyphyllos*—Largeleaf Linden, *Ulmus thomasi* Rock Elm.

Medium Trees—30′ to 45′

*Betula papyrifera*—Paper Birch, *Castanea mollissima* — Chinese Chestnut, *Evodia hupehensis* — Hupeh Evodia, *Fraxinus excelsior*—European Ash, *Halesia monticola*—Mountain Silverbell, *Hemiptelea davidi*—David Hemiptalea, *Prunus sargenti*—Sargent Cherry.

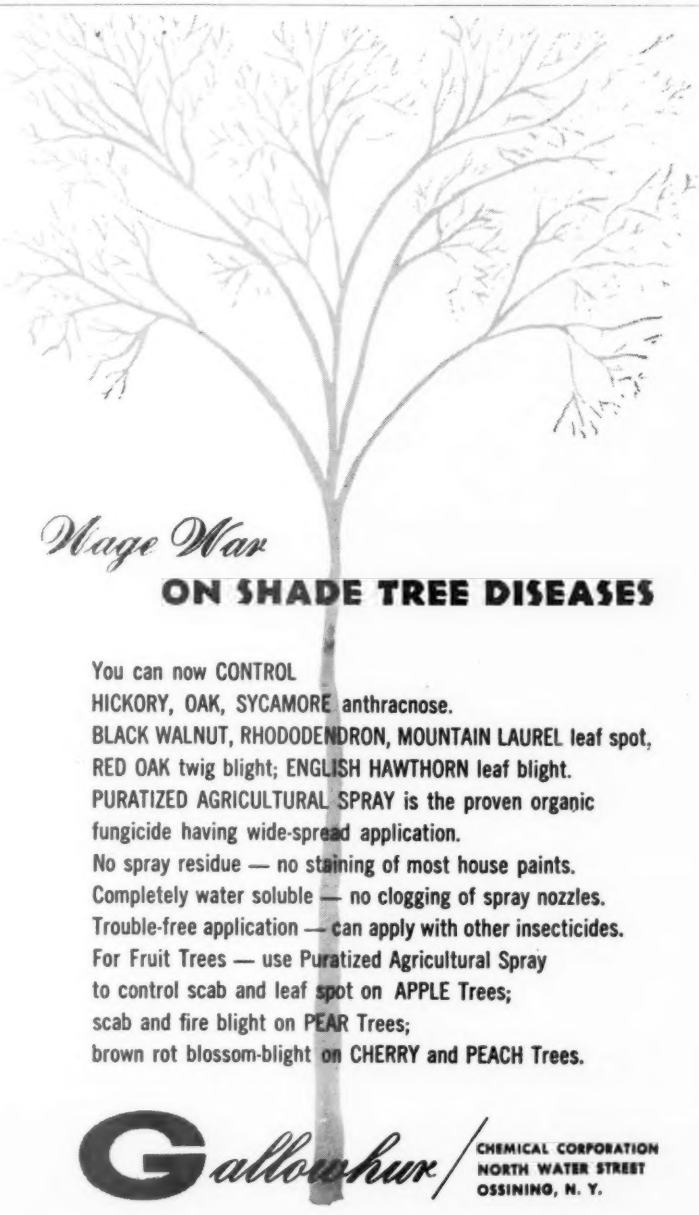
Small Trees—20′ to 30′

*Euonymus yedoensis*—Yeddo Euonymus, *Evodia danielli* — Korean Evodi, *Syringa pekinensis*—Pekin Lilac.

Class No. 4—40%

No large tree in this class

*(Continued on Next Page)*



*Wage War*

**ON SHADE TREE DISEASES**

You can now CONTROL
HICKORY, OAK, SYCAMORE anthracnose.
BLACK WALNUT, RHODODENDRON, MOUNTAIN LAUREL leaf spot,
RED OAK twig blight; ENGLISH HAWTHORN leaf blight.
PURATIZED AGRICULTURAL SPRAY is the proven organic fungicide having wide-spread application.
No spray residue — no staining of most house paints.
Completely water soluble — no clogging of spray nozzles.
Trouble-free application — can apply with other insecticides.
For Fruit Trees — use Puratized Agricultural Spray
to control scab and leaf spot on APPLE Trees;
scab and fire blight on PEAR Trees;
brown rot blossom-blight on CHERRY and PEACH Trees.

Gallowhur / CHEMICAL CORPORATION
NORTH WATER STREET
OSSINING, N. Y.

## Shade Tree Value

*(Continued from Page 13)*

Medium Trees—mostly 30′ to 45′

*Betula pendula gracilis* — Cutleaf European White Birch.

Class No. 5—20%

Large Trees—mostly 60′ or above

*Ulmus pumila*—Siberian Elm.

No medium or small trees in this class.

TREES OF REGION V—MIDWESTERN

Class No. 1—100%

*Acer saccharum*—sugar maple, *Acer platanoides*—Norway maple, *Acer rubrum*—red maple, *Fagus grandifolia*—American beech, *Gleditsia triacanthos Moraine*—Moraine honey locust, *Ostrya virginia*—Eastern Hophornbeam, *Quercus alba*—white oak, *Quercus borealis*—red oak, *Quercus macrocarpa* — bur oak, *Quercus palustris*—pin oak.

Class No. 2—80%

*Carya ovata*—shagbark hickory, *Celtis occidentalis* — hackberry, *Fraxinus americana*—white ash, *Fraxinus pennsylvanica lanceolata*—green ash, *Ginkgo biloba*—ginkgo, *Gleditsia triacanthos inermis*—thornless honey locust, *Juglans nigra*—black walnut, *Tilia cordata* — little-leaf linden.

Class No. 3—60%

*Aesculus glabra*—Ohio buckeye, *Aesculus hippocastanum* — horse chestnut, *Platanus occidentalis*—sycamore, *Prunus serotina*—black cherry, *Ulmus fulva*—slippery elm.

Class No. 4—40%

*Populus bolleana*—bolleana poplar, *Prunus pennsylvanica*—pin cherry, *Tilia americana*—basswood, *Ulmus americana*—white elm, *Ulmus americana Moline* Moline elm.

Class No. 5—20%

*Acer negundo*—box elder, *Acer saccharinum*—silver maple, *Ailanthus altissima*—ailanthus, *Catalpa bignoniodes*—catalpa, *Populus alba*—white poplar, *Populus deltoides*—cottonwood, *Robinia pseudoacacia*—black locust, *Saliz sp.*—willow, *Sorbus americana*—mountain ash, *Ulmus pumila*—Siberian elm.

ROCKY MOUNTAIN SHADE TREES

For Irrigated Areas 4000 to 6000 feet

Large Trees

Class No. 1—100%

*Acer saccharinum*—soft maple, *Aesculus hippocastanum* — common horsechestnut, *Aesculus octandra* — yellow buckeye, *Celtis occidentalis* — common hackberry, *Gleditsia triacanthus inermis*—thornless honey locust, *Gymnocladus dioicus*—Kentucky coffee-tree, *Quercus macrocarpa*—bur oak, *Tilia americana* — American linden, *Tilia europea* — European linden, *Ulmus americana*—American elm.

Class No. 2—80%

*Acer platanoides* — Norway maple, *Acer platanoides Schwedleri*—Schwedler maple, *Acer saccharinum laciniatum*—cutleaf weeping maple, *Acer saccharum*—sugar maple, *Aesculus glabra* Ohio buckeye, *Betula papyrifera*—paper birch, *Betula alba* — European white birch, *Betula alba gracilis*—cutleaf weeping birch, *Betula populifolia* — gray birch, *Catalpa speciosa*—western *catalpa*, *Fraxinus pennsylvanica lanceolata* — green ash, *Juglans nigra*—eastern black walnut, *Quercus falcata*—southern red oak, *Quercus palustris*—pin oak, *Quercus robur*—English oak, *Ulmus procera*—English elm.

Class No. 3—60%

*Acer pseudoplatanus*—Sycamore maple *Fraxinus americana*—white ash, *Larix sp.*—Larch, *Morus alba tatarica* and *rubra*—Russian and red mulberry, *Platanus occidentalis* — sycamore, *Populus sargenti*—western broadleaf cottonwood, *Prunus serotina*—black cherry, *Quercus alba*—white oak, *Quercus coccinea* — scarlet oak, *Ulmus pumila* — Siberian elm.

Class No. 4—40%

*Acer negundo*—boxelder, *Ginkgo biloba*, *Juglans cinerea*—butternut, *Liriodendron tulipifera* — tuliptree, *Populus alba bolleana*—bolleana poplar, *Populus abla*—silver poplar. *Populus andrewsi*—Andrews poplar, *Populus angustifolia*—narrowleaf poplar, *Populus deltoides missouriensis* — balsam poplar, *Populus canadensis engenei*—Carolina poplar, *Populus nigra*—lombardy poplar, *Populus simoni*—Chinese poplar, *Salix*—willows.

Small Trees

Class No. 1—100%

*Acer ginnala*—amur maple, *Catalpa ovata*—Chinese catalpa, *Crataegus crusgalli* — cockspur hawthorn, *Crataegus phaenopyrum* — Washington hawthorn, *Elaeagnus angustifolia* — Russianolive, *Koelretueria paniculata*—goldenraintree, *Malus sp.*—dolgo crabapple, *Malus sp.* hopa crabapple, *Malus sp.* — redsilver crabapple, *Prunus cerasus*—sour cherries, *Sophora japonica*—Japanese pagoda tree, *Sorbus americana*—mountainash, *Sorbus aucuparia*—European mountainash, *Sorbus hybrida*—oakleaf mountainash, *Tilia cordata*—littleleaf linden, *Xanthoceras sorbifolium*—shinyleaf yellowhorn.

Class No. 2—80%

*Alnus tenuifolia* — mountain alder, *Crataegus coloradensis*—Colorado hawthorn, *Crataegus oxycantha* and *monogyna* — English hawthorns, *Crataegus oxycantha*—Cl. Paul's scarlet thorn, *Crataegus punctata* — dotted hawthorn, *Juglans rupestris*—Texas black walnut, *Malus baccata* — Siberian crabapple, *Malus pumila* — Cl. Niedzwetzkyana crabapple, *Malus purpurea*—eley crabapple. *Malus ioensis*—prairie crabapple, *Malus ioensis* — cl. bechtel crabapple, *Morus alba* — cl. weeping mulberry, *Populus tremuloides* — quaking aspen, *Prunus sibirica*—Siberian apricot, *Robinia neomexicana*—New Mexican Locust, *Salix pentandra* — laurel willow, *Syringa japonica*—Japanese tree lilac.

Class No. 3—60%

*Acer campestre*—hedge maple, *Betula fontinalis*—water birch, *Cercis canadensis*—eastern redbud, *Cladarastus lutea*—American yellowood, *Crataegus saligna*—willow hawthorn, *Malus floribunda*—Japanese flowering crabapple, *Prunus americana*—cl. Newport plum.

Class No. 4—40%

*Ailanthus altissima*—tree of heaven, *Alnus glutinosa*—European alder, *Carpinus betulus* — European hornbeam, *Carya sp.*—hickory, Catalpa *bignoniodes*—umbrella catalpa, *Fagus sylvatica* European beech, *Malus sp.*—crabapple (including arnold, carmine, parkman, and similar species and varieties).

For High Altitude, Mountain areas, 6000 to 9000 feet

(In many very hight towns, the native evergreens are the only street trees possible.)

Large Trees

Class No. 1—100%

*Populus angustifolia* — narrowleaf poplar, *Populus acuminata*—smoothbark poplar.

Class No. 2—80%

*Abies lasiocarpa* — alpine fir, *Picea engelmanni* — engelmann spruce, *Picea pungens*—Colorado spruce, *Pinus aristata*—bristlecone pine, *Pinus contorta latifolia*—lodgepole pine, *Pinus flexilis*—limber pine, *Populus canadensis eugenei*—Carolina poplar, *Populus deltoides missouriensis*—balsam poplar, *Salix alba vitellina*—yellowstem willow, *Salix acutifolia*—Russian willow.

Small Trees

Class No. 1—100%

*Populus tremuloides*—quaking aspen.

Class No. 2—80%

*Populus grandidentata* — bigtooth aspen, *Salix alba*—white willow.

For Dry Plains Areas 3500 to 5000 feet

Large Trees

Class No. 1—100%

*Celtis occidentalis*—hackberry, *Gleditsia triacanthus*—honey locust, *Populus sargenti*—cottonless cottonwood, western broadleaf cottonwood, *Ulmus pumila*—Siberian elm.

Class No. 2—80%

*Acer saccarinum*—soft maple, *Fraxinus pennsylvanica lanceolata*—green ash, *Ulmus americana*—American elm.

Small Trees

Class No. 1—100%

*Elaegnus angustifolia*—Russian olive.

Class No. 2—80%

*Morus alba tatarica* — Russian mulberry.

# KEEPS ON CUTTING...

If you want reliability in a chain saw, you want a Homelite. The tough woods-tested construction of Homelite chain saws means *far* less down time . . . *more* steady production . . . hours *more* cutting before servicing.

And whether it's the 22 pound Model 17 with 3.5 horsepower, or the 30 pound, 5.5 horsepower Model 5-30 — a Homelite slices through big stuff in seconds . . . in *any* position . . . without carburetor adjustment or loss of power.

Remember, for top performance . . . for minimum maintenance . . . for REAL dependability — count on a Homelite for faster, easier, *more profitable* cutting!

PERFORMANCE · DEPENDABILITY · SERVICE

**HOMELITE CORPORATION**

805 RIVERDALE AVENUE • PORT CHESTER, N. Y.

*Canadian Distributors:*

Terry Machinery Co., Ltd., Toronto, Montreal, Vancouver, Ottawa

## Chestnut

*(Continued from Page 6)*

***Seedling Chestnut tree in a blight infested area.***

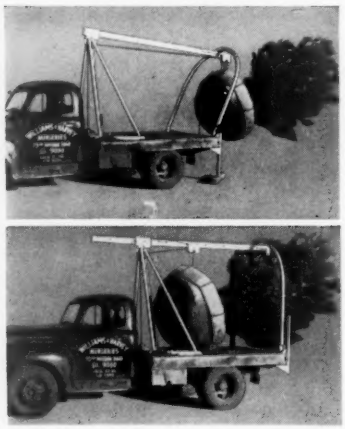
sprouts often live to bear.

A high plateau in West Virginia was for many years a cut-over pasture but now is government-owned and fenced from cattle. Here three generations of chestnuts can be read from annual rings. First are rotting stumps covered with forest litter. Around their perimeters are other stumps marking the second generation. These were cut when they were about thirty years old. From the second generation stumps rises a new crop of sprouts, the largest of which are also about thirty years old. Probably the first stumps register the original forest, cut sixty years ago; the second, a young stand removed when the blight struck in the twenties; and the last stand is waging an unusually successful battle against the blight.

Here, in 1953, the public gathered chestnuts over an area several miles long and about a mile wide. Trees were bent and broken, some too large to bend were damaged by climbers forcing down the smaller limbs. The area is especially favored because it is open to the sun and free from cattle.

Last are a few plantings of American chestnuts grown from the seed of old trees and promising sprouts. Under favorable conditions the seedlings grow rapidly, sometimes bearing in their fifth year (Fig. 7). If blight spores are introduced, some of the trees are killed quickly; others succumb after a longer period. At least these over-optimistic plantings will help preserve the species —so long as their annual crops of nuts are planted and grown into trees. Perhaps some trees will show positive resistance; and it is not beyond possibility that an immune tree will appear.

And if a blight-immune American chestnut should occur? A program of controlled pollination and selection must be maintained, generation after generation, to fix a high degree of blight resistance and timber-type growth among seedlings. Already fifty years have passed since the blight appeared. In fifty or a hundred more a genuine seed strain of chestnuts—Chinese, American, or hybrid might be developed. Will such a project be undertaken wholeheartedly? It should.

**Williams & Harvey Nurseries Announce**

**NEW TREE MOVER**

- **New Light Weight**
- **Simpler to Operate**
- **Two Sizes, 6′ and 7′**
- **Quickly Demountable**
- **New Lower Costs**

**This improved new tree mover fits any standard truck. Ready now. Write us for specifications. Six-feet mover as pictured: complete with power winch and all needed pick-up parts: F.O.B. Kansas City, Mo. $1575**

**WILLIAMS & HARVEY NURSERIES**
**P. O. Box 8822 Kansas City, Mo.**

**Complete Line of Tree Surgery Supplies**

Dobbins Drinking Fountains—Webbed, Rawhide & Leather Climbing Saddles—Drop-Forged Saddle-Rope Snaps—Paint Cans with built-in Brush—Fanno Tree Saws—Special Bits.

*Write for Catalogue*

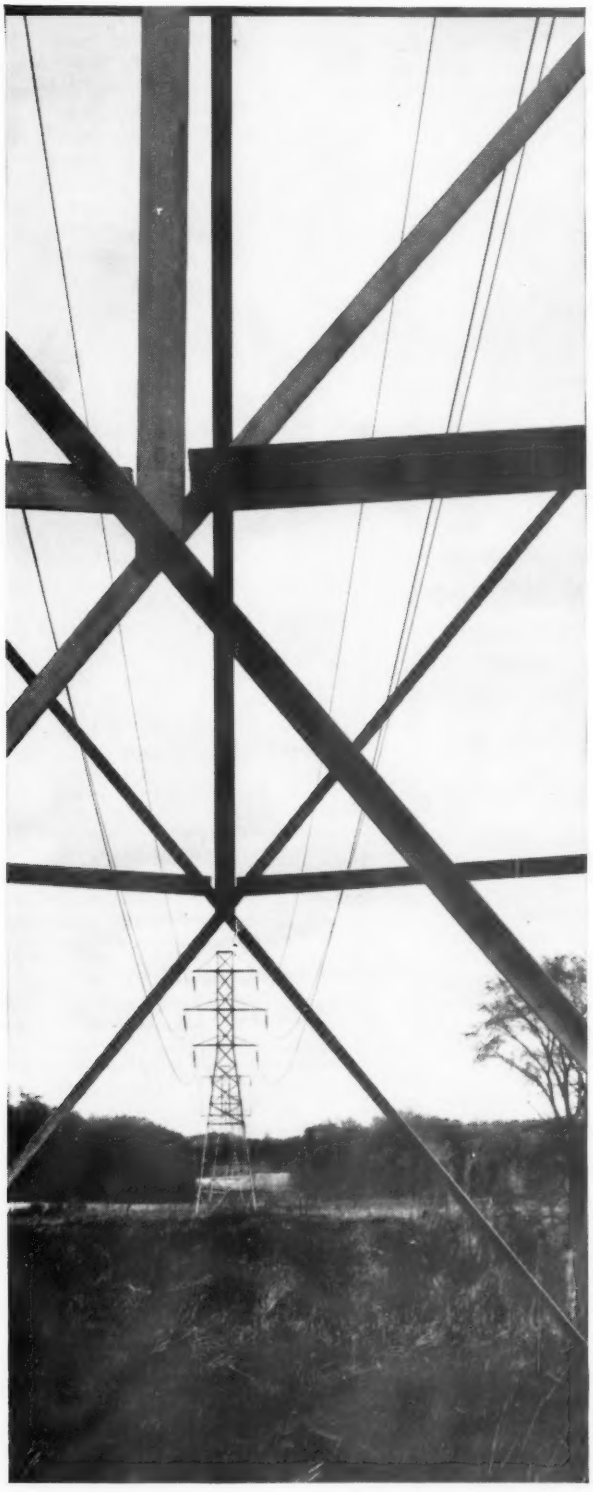
**Fruit Growers of Chester County, Inc.**
**WEST CHESTER, PA.**

**Sugar Maple**
8¼″—7′ ball
30″ deep
**Moved With A**
**JEFFREY**
**Complete with Slings & Chains**
**$1240.00**

**Write For Demonstration**
**JEFFREY Mfg. Co.**
Electric brakes — tow bar optional. **Falmouth, Ky.**

DOW

*from a maintenance point of view . . .*



# DOW BRUSH KILLERS

## cut costs in keeping right-of-ways clear of brush and weeds

Maintenance departments and spray service organizations can rely on specific Dow products doing specific jobs to cut costs of right-of-way vegetation control. It will pay you to get complete information on Dow brush and weed killers and their place in your maintenance program. Write us for information and assistance on the use of Esteron® 245, Esteron Brush Killer and the new brush killer, Kuron. THE DOW CHEMICAL COMPANY, Agricultural Chemical Sales Department, Midland, Michigan. In Canada: Dow Chemical of Canada, Limited, Toronto, Canada.

*you can depend on DOW AGRICULTURAL CHEMICALS*

DOW

**You Saw Their Ad in TREES**

## Big Trees

*(Continued from Page 9)*

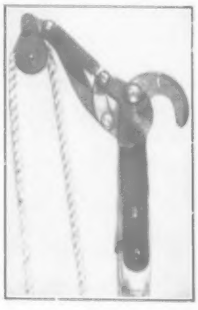
rapidly, surrounded the elm, cutting off all access to it. The tenant in charge of the place did not appreciate the damage being caused, and the fire burned for over a week, injuring the tree beyond recovery. From that date decay was rapid."

The Markham elm was for many centuries a conspicuous landmark of the Genesee Valley well known to the Indian tribes of western New York, who used the site as a camping ground. Inadvertent removal of two large limbs by farm laborers in 1842 is the first recorded inroad on the tree. The fire of 1852 was a manmade catastrophy and was followed in 1887 by a serious blow down of a large section of the main trunk and branches in a July storm. In March, 1955 some regrowth of the original tree was still standing and the struggle for existence continued for better than 100 years. How long a well located and protected American elm would live is a question. The Markham was probably 500-600 years old.

The American elms of today as indicated by the survey conducted by the New York State Arborists Association are still large trees since three were reported over 20 feet in girth at 4½ feet above the ground. The Bellinger Line Elm is considered the largest and is followed by the Harder Elm, Hurley, N. Y., 23 feet, three inches in girth. This tree was reported by Mr. Frank L. Miller of Arboreal Associates, Hurley, N. Y. The third large elm in the town of Gerry, Chautauqua County on the property of Lee Smith was reported by Miss Dora Woods of Gerry as 22 feet, 6 inches in girth, 4½ feet above the ground, 110 x 120 feet in spread and 85 feet in height.

The Johnson Hall Elm at Johnstown, Fulton County, N. Y., and the Prattsville Elm on the Catskill Turnpike, Prattsville, Greene County, were 19 feet, 10 inches in girth, branch spread exceeds a hundred feet and the height from 75 to 85 feet. The Johnson Hall Elm was reported by arborist Douglas S. Campbell of Johnstown, N. Y., who had the tree under his care in 1954 at the historic site of Johnson Hall. The Prattsville elm was reported on the property of A. N. O'Hara, Prattsville by George H. Peters of Long Island, who visited the tree in 1947 when it was reported to be 20 feet, three inches in girth. The figures would indicate that the tree has not increased in girth appreciably during the past eight years. In 1952 Mr. Peters published "The Trees of Long Island" as Publication No. 1 of the Long Island Horticultural


BARTLETT TREE TOOLS



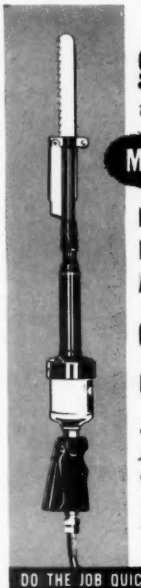
Write for prices of TREE PAINT and ask for our complete catalog, No. 35.

TREE SURGERY SUPPLIES

TRADE MARK CONTROLLED

Bartlett Mfg. Co.
3028 E. Grand Blvd.
Detroit, Mich.





go modern! *with*

MILLER-ROBINSON

POWER OPERATED LIMB LOPPERS AND TREE SAWS

CUT TRIMMING COSTS 30-50%

*Select the RIGHT Unit from a Full Line of Fourteen Time-Tested, Field-Proven Models*

DO THE JOB QUICKLY, EASILY, ECONOMICALLY

Every Cut Sharp and Clean
No Ragged, Split or Chewed Limbs or Branches
Made to Stand Hard Work and Abuse
Complete Line of Compressors and Accessories Available
Insulated and Non-Insulated Models

*Field Demonstrations at Your Convenience*

Write for Complete Information and Name of Nearest Dealer!

MILLER-ROBINSON CO.
7007 Avalon Boulevard
Los Angeles 3, California

*Pioneer Designers and Builders of Air Powered Trimming and Pruning Equipment*



PRATT'S *Sprays*

Pratt's Sprays are formulated for use in mist or hydraulic sprayers to give the greatest degree of safety and effectiveness for shade trees and evergreens.

**PRATT'S SUMMER SPRA-OIL**—A miscible 97% white oil type summer oil. For use in the control of red spider, scale crawlers, white fly and as an effective ovicide, also used as a dormant spray for evergreens where a lighter oil is desired.

**D-X INSECT SPRAY**—One of the most effective non-poisonous sprays for sucking and chewing insects of shade trees as well as fruit trees. Contains rotenone, pyrethrum and piperonyl cyclonene for great effectiveness and safety.

**PRATT'S DDT SPRAYS**—Pratt's DDT sprays are especially formulated for the safety and effectiveness demanded in shade tree work. Pratt's Emulsifiable 25% DDT —Pratt's S-30% DDT and Pratt's dry wettable 50% DDT.

**SCALECIDE**—The oldest and best known dormant oil spray. Contains 96% highly refined, highly paraffinic dewaxed oil. Use Scalecide for the control of scale, aphis, red mite, and over-wintering insects on shade trees, fruit trees, evergreens and ornamentals.

***Order Pratt's Sprays from your distributor. Bulletins available — Pratt's Oil Sprays, Pratt's Sprays for Mist Blowers and Hydraulic Spraying.***

★

**B. G. PRATT CO.**

*INSECTICIDES*

**204 Twenty-first Ave., Paterson, N. J.**


**PLANT AMERICA—WISELY**

Society and lists the large trees as found over a five-year survey. Mr. Peters reports 16 feet, eight inches girth for the largest of American elms on Long Island, a tree on the estate of J. P. Morgan at Glen Cove. The largest tree on Long Island was reported to be 26 feet, seven inches in circumference for an imposing American sycamore at Wheatley Hills.

Additional elms noted in the New York Arborist Survey include Vestal Elm, Broome County, 18 feet, 10 inches in girth reported by W. K. Schultz, Dutch Elm Disease Inspector, Homer, N. Y. and by H. H. Severn, Trojan Tree Service, Vestal, N. Y. The Texaco Beacon Laboratories, Dutchess County, have an elm in fine condition and well cared for some 17 feet in girth. The Strawberry Hill Elm, Irvington, Westchester County, N. Y., 16 feet in girth, 126 feet in spread was reported by Dewhirst W. Wade, President of the New York State Arborists Association, Pleasantville, N. Y.

Sandy Creek-Boylston Town Line Elm, Oswego County, 14 feet, five inches in girth, 130 x 118 feet in spread, is a fine healthy free standing specimen and a good example of the American elm at its best, reported by Miss Beatrice B. Wood of Central Square, N. Y.

Glens Fall Elm, Warren County, 12 feet, eight inches in girth, reported by arborist F. A. Conley and City Forester Richard Climas of Glens Falls.

The New York State Arborists Association present the report of their large Tree Survey April 29, the last Friday in April and the occasion of Arbor Day in a number of the states this year. New York State ordinarily celebrates Arbor Day on three separate dates set up by the State Department of Education and to accommodate the several climatic regions of New York State so that tree planting ceremonies can be undertaken at appropriate times.

The panel of judges who considered the data submitted in the Elm Tree Survey by New York State Arborists included Dr. A. M. S. Pridham, Professor of Ornamental Horticulture, State University of New York College of Agriculture at Cornell University, Ithaca, Chairman; Dr. D. S. Welch, Professor of Plant Pathology at the New York State College of Agriculture; Mr. Dewhirst Wade, President of the New York State Arborists Association and arborist at Pleasantville, N. Y.; Mr. Francis Larmore, past president of the NYSAA and arborist of Schenectady, N. Y.; Senator Thomas C. Desmond, Newburgh, N. Y.; Prof. R. R. Hirt, State University of New York School of Forestry, Syracuse; and E. W. Littlefield, Conservation Department, Albany.


Severe Usage or Freezing Cold...

STRUNK

SpeeDemon Now Raises Guide Bar Life to a NEW HIGH!

New! PRESSURIZED OILING SYSTEM

Multiplies guide bar life with tough, continuous cutting—even at 30° or 40° below zero.

Patents Pending

New! RUGGED GUIDE BARS

"Hardite", "Dimondite", and "Rite-Oil-Flo Dimondite" guide bars give the longest cutting mileage available today in direct-drive saws.

$179 F.O.B.

with 16" chain and "Hardite" bar

Also available with 19" chain and bar

(Optional Pressurized Oiling System and "Dimondite" or "Rite-Oil-Flo Dimondite" bar available at slight additional cost.)

Here it is—the SpeeDemon with revolutionary features that now make it the *only* practical direct-drive chain saw for day-after-day cutting under severe conditions of usage and temperature. Now you get not only the simplicity and low cost of STRUNK direct-drive engineering, but by far the longest guide bar life of any utility saw available today!

With the new **Pressurized Oiling System**, you get full use of all the unmatched wear resistance built into all SpeeDemon guide bars. Oil always flows freely—no matter how tough the cutting or how low the temperature. And for added safety insurance, this new system is available with a pump. When pump pressure is lost, you know you're out of oil.

The new **Ruggedized Guide Bars** are absolutely the longest lasting direct-drive bars available anywhere. The standard "Hardite" bar itself is truly amazing, yet SpeeDemon now is also available with the "Dimondite" for even longer nonstop cutting . . . or the "Rite-Oil-Flo Dimondite" bar for the ultimate in trouble-free service. With its exclusive, patent-applied-for feature, the "Rite-Oil-Flo Dimondite" bar constantly channels oil to the point of greatest wear at tip of bar.

Send the coupon now for full details. You can also have your STRUNK dealer install these revolutionary features on your present SpeeDemon chain saws. You'll never have cutting so good!

**PRO—4 HP, 28 lb.**

The rough, tough *all-position* cutting chain saw available with automatic lubrication and triple-life guide bars in lengths through 24".

**HARVESTOR—4 HP, 28 lb.**

A really rugged, geared-drive model for *two-position* cutting. "Burn-proof" guide bars in lengths through 24".

**STRUNK** Chain Saws, Inc.
622, Coatesville. Penna.

☐ Send me the name of my nearest STRUNK dealer.

☐ Send me full details about the new SpeeDemon guide bars and *Pressurized Oiling System.*

NAME_____

ADDRESS_____

POST OFFICE_____ STATE_____

# NAA NEWS

By PAUL E. TILFORD, *Secretary*
Box 426, Wooster, Ohio

*Santa Barbara Conference*

"California—Here We Come," Ah yes, how many of us? "Are you going to Santa Barbara?" has become almost a salutation when Shade Tree Conference members meet. It is just surprising how many folks are making plans to attend the 31st National Shade Tree Conference at Santa Barbara, August 1 - 5.

This will be the first time the N.S.T.C. has been held west of Milwaukee, Chicago or St. Louis. The Conference has truly become of age and is demonstrating that it really is National in scope by going to the West Coast this year. The Western Chapter, including Arizona, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming and British Columbia has a membership of over 250. It certainly is appropriate for the Conference to meet in California since that state alone has 220-some N.S.T.C. members.

This meeting will be different in many ways from previous Conferences and each of the differences will be an additional pleasure and interesting experience. The program and exhibits, of course, will be up to the usual high standards. The tours of West Coast gardens, California trees (and all of Santa Barbara is practically a Botanical Garden for trees), barbeque and entertainment ranch-style, experiecing that western hospitality, and the opportunity to visit numerous places of interest on the way to and from the meeting are the differences between this Conference and previous ones for the members east of the Rocky Mountains.

Just one bit of advice—in case you haven't made your reservation at Santa Barbara and you expect to be there, do it now. There will be enough rooms but none to spare.

* * * *

*Costs of Accidents*

That accidents are costly goes without saying but probably they are more costly is generally believed. There are two basic kinds of costs involved in occupational accidents from the standpoint of the employer. One is the cost of insurance. The other is the uninsured costs or losses.

It is easy to learn the insurance cost and that, for many tree-service companies, is almost staggering. The uninsured cost of accidents is not so evident but always exists. Rollin H. Simonds, reporting on Tree Costs of Accidents in April National Safety News, gave information on uninsured costs of lost-time accidents in metal-working manufacturing.

An anaylsis was made of 49 lost-time accidents in this field. While the uninsured costs of accidents in metal-working manufacturing would not be the same as in the tree-care industry, they should give some idea of the magnitude of uninsured costs of accidents. The average medical and compensation payments of these typical lost-time accidents was around $400 each. The uninsured costs to the employer were as follows:

| | |
|---|---|
| Wages of uninjured who were involved | $ 20.40 |
| Wages of injured | 27.30 |
| Property damage | 7.20 |
| Extra cost for overtime | 5.00 |
| Suprevisor's time | 5.70 |
| Lower output from injured | 5.90 |
| Learning period of new worker | 4.40 |
| Cost of investigation and processing compensation | 17.30 |
| Medical costs not insured | 7.70 |
| | $102.00 (rounded) |

The uninsured cost of the lost-time accident was approximately one-fourth

**Azaleas, Rhododendrons, Trees**
**Make Beautiful Roots in "Green Thumb"**

**GREEN THUMB AERATES—HOLDS MOISTURE—AIDS ROOTING**

1. 97% pure, organic sedge reed, bacterially high content.
2. One cubic foot makes upward to 50 cu. ft. of good soil, or 15 cubic feet of rich organic soil.
3. Excellent natural nitrogen—readiness to use—going to work at once.
4. Delightful flowing into the soil in handling—uniform structure creates maximum economy.
5. Normal moisture holding, with gradual delivery only to soil and plants assure the maximum in plant development.
6. A product processed, based on 30 years proven continuous operation, has a ph of 4.5 to 5.5, that is quickly, easily and economically adjusted to needs of any plant material.
7. The most efficient and economical soil building nature product in existence.

***"Green-Up America With Green Thumb Peat"***

**PRICES ON TRUCK OR CAR LOADS ON REQUEST**

**GREEN THUMB PEAT-HUMUS CO.**
**CAPAC, MICHIGAN**

of the insured cost.

Another uninsured cost arises from first-aid cases or accidents with no lost time. These cases usually will cause expense in most of the following classifications: Wages for uninjured, Wages for injured, Supervisor's time, Lower output from injured, Medical attention, Cost of investigation, and Other costs. A survey of Michigan industry, reported by Simond showed that for every lost-time case there are about 10 doctor's cases and more than 150 first-aid cases. In addition, there are the no-injury accidents—accidents that are costly, but by good fortune, do not cause personal injury. The total of uninsured and insured costs makes the price of accidents higher than many of us realize.

There are no cheap accidents and the only way to reduce their cost is to have fewer of them. An effective safety program pays off financially.

* * * *

*Shade Tree Evaluation*

At the 23rd National Shade Tree Conference action was taken requesting the Conference together with the National Arborist Association to work out a method for arriving at the value of shade trees. A joint committee was appointed with Norman Armstrong, Chapel Hill, North Carolina, as chairman.

The committee has suggested a method of evaluating shade trees and has classified the trees as to value for shade and ornamental purposes in the various regions of the U. S., except the West Coast region. It is expected that the classification of west coast trees will be completed this year.

Since the reports scattered through several volumes of the Conference proceedings the essential parts for using the suggested method of evaluating shade trees and the tree classifications have been assembled, reproduced by photo-offset and bound. While this has been done as a service to National Arborist Association members a limited number of extra copies are available. As long as they last these can be had for $1.00 each to cover cost and mailing. National Arborist Association, P. O. Box 426, Wooster, Ohio.

**TREES Magazine**

*A Fine Gift*
*all year 'round*

1-year – 2.00
3-years – 5.00

**TREES Magazine**
Olmsted Falls, Ohio

**HELLER-GRO**
REG. U. S. PAT. OFF.
COMPLETE PLANT FOOD

**THE SURE ANSWER FOR**

**Hurricane Damaged Trees**

***Last season's hurricanes caused severe damage to ornamental trees in the nature of loosened, broken and bruised roots. A jet feeding with HELLER-GRO will aid these trees quickly to establish new roots and take a new lease on life.***

Many Shade Tree Members have found that HELLER-GRO produces best results in both foliar and jet feeding of trees, and that it develops strong, deep-rooted turf of richest color. HELLER-GRO is NOT a "shot in the arm," but a complete balanced food which brings prolonged growth response, yet improves color quickly.

This highly concentrated paste is completely and quickly soluble. The solution positively will not burn. Made from USP grade chemicals only, it is a high grade product which can be depended on. TRY IT!

***Contact One of These Distributors or Users***

Karl Amalia, 5 Elm Street, Manchester, Mass.; Frost and Higgins Co., 20 Mill Street, Arlington, Mass.; Huntley Tree Service, 245 Broadway, Hanover, Mass.; Alfred F. Carlstrom, 1737 West 91st Street, Chicago 20, Ill.; Robert J. Sordet, P. O. Box 168, Villa Park, Ill.; Frank VerKoulen, 4240 Indiana Avenue, Kansas City, Missouri; W. K. Johnson, 750 Highland Avenue, Beloit, Wisconsin; L. D. Ely, 13 Penn Street, Waynesboro, Pennsylvania; Marianne Chemical Co., P. O. Box 1018, Columbus, Ga.; Walt Morrow, Morrow Tree Co. P. O. Box 352, Sewickley, Pennsylvania; Rocky Mountain Seed Co., 1321-27 15th Street, Denver, Colorado; Wolf Tree Co., 3248 Abbortsford Road, Goodell, Michigan; Andrew Wilson, Inc., Springfield, New Jersey; Lease Garden Center, 810 10th St. North, Great Falls, Montana.

New England Distributor:
C. L. Halvorson, 150 North Street, Pittsfield, Mass.
New York Distributor:
F. W. Larmore, United Tree Service, 1021 High Bridge Road, Schenectady, New York.
Canadian Distributor:
Norco Garden Products, 95 King St. East, Toronto, Canada.

*Territories Open For Distributorships*

**Gordon H. Knowles, Representative**
5 Elm St., Manchester, Mass.
**Eastern Warehouse, 5 Elm St. Manchester, Mass.**
**Factory and Main Office; Colorado Springs, Colo.**

# Authors and Books

**The following books may be ordered from TREES Magazine, 7621 Lewis Road, Olmsted Falls, Ohio.**

LANDSCAPING YOUR OWN HOME, by Alice L. Dustan. The Macmillan Co., New York. 248 pgs., illus. $3.95

Using her experience as a designer and teacher of landscaping, Alice L. Dustan has written this common-sense, delightful, easy-to-use book to guide the homeowner in planning and planting his grounds. From basic plan to accomplishment, Miss Dustan clearly explains the entire process of landscaping. Whether starting with ungraded land or redesigning an old place, anyone following her suggestions can be assured of home grounds that will provide year-round beauty and enjoyment.

Each chapter is devoted to a separate aspect. Step by step, Miss Dustan covers such points as surveying one's property; masonry construction; fences, walls, and other barriers; shade, fruit, and flowering trees; evergreen shrubs; deciduous shrubs; lawns and ground covers; and seasonal color. A how-to-do-it section at the end of every chapter gives specific directions for carrying out each stage of the work, including the proper dimentions, all equipment needed, and complete instructions for building, planting, and maintenance.

The individual family's own way of life is the primary determining factor in all of Miss Dustan's suggestions. Plans to fit both contemporary and traditional designs are provided for such significant aspects of family life as outdoor living and recreation. A unique scheme which Miss Dustan has devised enables the whole family to live with the plan before it is developed. Movable objects are used in place of trees and shrubs, and lengths of hose or heavy rope mark the bounds of paths and driveways. If the arrangement proves awkward for daily use, the design can be changed before plants are set in place and routes of travel established.

Having helped hundreds of amateur gardeners solve their property problems, Miss Dustan understands the layman's limitations without underestimating his capabilities. All of her directions can be followed without professional assistance. Nearly forty photographs show proof of what can be accomplished by amateurs, since the majority of settings shown have been planned and planted by the owners themselves.

These photographs, together with thirty-three drawings by Henry H. Wiss, Associate Professor of Architecture at the Virginia Polytechnic Institute, illustrate the directions of the text. They include five complete plans to accompany five pairs of before and after pictures.

Among the most helpful parts of the book are the nineteen lists of plants for special purposes or of special kinds, such as plants for crevices in walls, woody plants for two-season effect, trees for dry soil, etc. Miss Dustan also describes methods for treating various problem areas which often plague the landscaper.

These and many other helpful features of this exceptionally usable book will give invaluable guidance to the amateur landscape planner. Whether one is building, buying or renting a new place, or would like to redesign existing grounds, Alice Dustan's sprightly writing and lucid instruction will be an inspiration for developing pleasure-giving grounds about the home.

NORTH AMERICAN TREES, by Richard J. Preston. Iowa State College Press, Ames Iowa. 371 pgs., illus. $3.50

Here is the most complete pocket-sized manual of trees now available. Convenient to use and carry, with full-page illustrations and accurate descriptions that provide the user with a ready means of identifying 558 species of North American trees.

*North American Trees* describes all North American trees except those found in Mexico and a few tropical species growing on the southern fringe of the United States. In the Introduction you'll also find basic information on characters and techniques used in identifying trees.

There are 160 full-page illustrations covering 232 species of importance or general interest, showing descriptive characters and distribution maps. Accompanying the illustrations are concise descriptions of the botanical and silvical characteristics. Similar descriptive material is included on an additional 336 less important species.

The terminology has been kept as simple as possible without sacrificing scientific accuracy, and a comprehensive glossary helps the reader define the necessary technical terms.

WEEDS, by W. C. Muenscher. (Second Edition). The Macmillan Co., New York. 560 pgs., illus. $10.00

Since its first publication, this authoritive book has been the standard reference for everyone concerned with weeds, especially their identification for purposes of control.. Now, completely revised and reset, this monumental work is more valuable than ever.

Dr. W. C. Muenscher has added more than seventy new descriptions to the original list of five hundred. These include the common and botanical names, native habitat and range, methods of propagation, means of dissemination, type (perennial, annual, or biennial), poisonous qualities (if any), and the location and soil where each weed is most frequently found.

The 135 plates, showing 331 varieties, contain twelve entirely new pages, depicting nineteen plants, most of which have become obnoxious weeds since the first edition was prepared. Not only is the whole plant shown, but details of root, seed, branch, flower, and fruit are also pictured. Keys and tables, completely brought up to date, insure easy identification.

Full descriptions are provided and information is given on those growth habits that enable weeds to overcome competition; on methods of reproduction, which are generally more proliferous and more certain than those of useful plants, and on sources of weeds.

Control methods are explained in a series of numbered paragraphs, to which references are given in the individual descriptions. Modern methods of chemical control, which were unknown at the time of the earlier edition, are now included.

A glossary of terms, a table of weights, measures, etc., a dozen pages of bibliographical references, and an index of nearly 3,000 entries complete the book. Nomenclature following the eighth edition of *Gray's Manual of Botany*, 1950, is used throughout.

Dr. W. C. Muenscher is Professor Emeritus of Botany, New York State College of Agriculture, Cornell University. As a writer, he is widely known for his authoritative works, including *Poisonous Plants of the United States.*

## Crab Apples

Crab Apples that rate well in processing tests and also provide handsome flowers, are Redfield and Redford. Both are early, hardy ornamentals and produce good-sized fruits. The flesh of both varieties is red throughout.

Other crab apples recommended by fruit specialists are Dolgo and Young America. Dolgo is a Russian variety introduced into this country by the South Dakota Experiment Station. The fruit is small but juicy and makes a rich, ruby-red jelly. Young America, an old variety of unknown origin, produces fruit of good size and bright red color that makes a clear, red jelly.

The Van Eseltine with double pink blossoms and an unnamed seedling with brilliant red blossoms are listed as outstanding ornamental varieties. Both retain their fruit during the winter and hence attract birds. *Hort. Newsletter.*

## Eucalyptus

*(Continued from Page 8)*

manufacture of soap perfumes, although small quantities are sold to the East for self medication, and sometimes for incense.

A new industry which has been established after great difficulty is the production of lavender oil. France was once its exclusive producer, but today some of the finest commercial lavender oils are produced in the island State of Tasmania, from plants which came originally from France.

Australia's is one of the oldest essential oil industries, for a quarter gallon of oil from the "Sydney peppermint" *(E. piperita)* was the first article to be exported to England, soon after the first settlers arrived in 1788. The first Australian still for commercial production was erected in Victoria in 1852. Since then thousands of stills have been established throughout the country, their combined output averaging 200,000 imperial gallons every year.

Even though it may be many years before plantation cultivation is properly established in Australia along commercial lines, there is never likely to be a shortage of raw materials. The 700 species and varieties of eucalypts form about 75 per cent. of the flora of Australia.

Eucalypts are typically Australian trees, although some species are found in New Guinea, Timor and the Philippine Islands. In New Zealand, South Africa, California, South America, India and many parts of the Middle East, they can be seen growing in long, shady avenues and in groves, but all those trees have been established with seed obtained from Australia. Although many of these trees overseas have been grown for their commercial oils, the majority are used for timber industries or for wind breaks and soil conservation. No matter where they are grown, the so-called "gum tree" remains as typically Australian as the kangaroo or the koala bear.

# TAILORED TREES TO FIT THE AVAILABLE SPACE

CLEVELAND NORWAY MAPLE
SUPERLATIVE FORM

TILIA CORDATA LITTLELEAF
CAN'T BE TOPPED

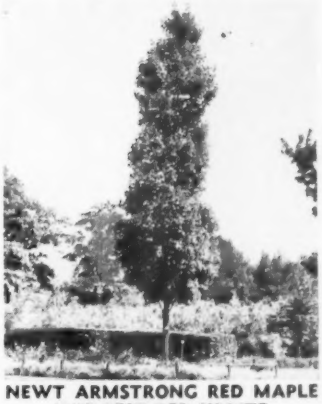
OSTRYA-HOPHORNBEAM
ONE OF THE BEST

TAILORED TREES
"To Fit The Space"

BUISMAN ELM
DED RESISTANT

ZELKOVA SERRATA
DED RESISTANT

Prepare and Order Now from the Finest Selection of Trees, Tailored for the Specific Problems of Street Planting.



NEWT ARMSTRONG RED MAPLE
THE BEST RED UPRITE

CHAS. F. IRISH NORWAY MAPLE
FINE UPSWEEPING FORM

***Do it Right, Don't Recreate the Mistakes of the Past.***

***Write for Catalog***

***ORDER NOW FOR FALL***

SORBUS ARIA LUTESCENS
WHITEBEAH MT. ASH

**Edward H. Scanlon & Associates**

*"The Tailored Tree Nursery"*

7621 Lewis Rd. Phone: ADams 5-2357 Olmsted Falls, Ohio

RETURN POSTAGE GUARANTEED
Trees Magazine, 7621 Lewis Rd.
Olmsted Falls, Ohio

Postmaster: If addressee has moved and new address is known, notify sender on Form 3547, postage for which is guaranteed.

Sec. 34.66 P.L.&R.
U. S. POSTAGE
PAID
Olmsted Falls, Ohio
Permit No. 12

WHY USE 3

WHEN 2 WILL DO

Actually, TWO drums of PENCO "34 give the same effective coverage as three drums of 25% emulsions. PENCO DDT Emulsion "34" contains three full pounds of DDT in each gallon . . . 34% DDT by weight. In this concentration 1/3 less solvent is required for a given leaf area; possibility of solvent burn is proportionately reduced. And remember, too, PENCO Malathion E-8, an emulsifiable concentrate with 8 pounds Malathion per gallon . . . high-power insect killing qualities . . . low toxicity for users. And . . . Penco Malathion E-8 is compatible for use with PENCO DDT Emulsion "34".

*You're RIGHT . . . you know . . . with PENCO Agricultural Chemicals*

Pennsalt Chemicals

**Pennsylvania Salt Manufacturing Company of Washington**

Tacoma 1, Washington

Philadelphia 7, Pa. • Montgomery, Ala. • Bryan, Tex. • Aurora, Ill.
Portland, Ore. • Wenatchee, Yakima, Wash.
Los Angeles, Berkeley, Calif.